THE AMERICAN FARMER.

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A RAVENOUS ENEMY.

The Four-Lined Leaf Bug a Native American Pest.

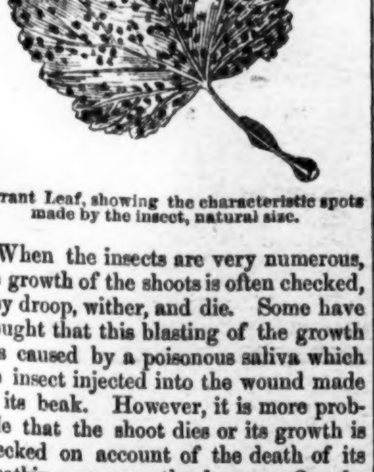
[Condensed from Mark V. Slingerland's Bulletin issued from Cornell.]

DURING THE past three years this insect has been very destructive to the foliage of currant and gooseberry bushes in several localities in our State and in other States. In some instances it has rivaled the well-known Imported Currant Worm (*Nematus ventricosus*) in destructiveness, and it has proven a much harder pest to control.

Unlike many of our worst pests, this insect is not an importation from Europe. It is a native to North America. In 1798 the species was described by Fabricius, an European, who discovered it in a collection of insects from North America. It thus received its name in Europe nearly a century ago. Thirty-four years later Say, an American entomologist, redescribed the insect under the name *Capsus 4-vittatus*, but suspected that it might be *Lygæus lineatus* of Fabricius. The further history of the insect in this country may be conveniently grouped under two headings.

The insect usually makes its first appearance in this State about the middle of May on the newest, tenderest terminal leaves. The insects are then so small and active in hiding themselves that they are not apt to attract attention. Their work, however, soon becomes apparent. Minute, semi-transparent, darkish spots appear on the terminal leaves. These spots are scarcely larger than a common pin's head, and are round or slightly angular in shape, depending upon the direction of the minute veinlets of the leaf which bound them. The insect has inserted its beak into the leaf and sucked out nearly all of the opaque green pulp or parenchyma of the interior within a small area bounded by the little veinlets. (Fig. 2.) The upper and lower epidermal layers of the leaf are not disturbed, except where the beak was inserted through one, and when the interior pulp is withdrawn these layers soon collapse, thus giving the spot a slightly depressed appearance. For two or three days these spots are not very conspicuous, as they differ but little in color from the remainder of the leaf. Soon, however, the collapsed epidermal layers turn brown and die, thus rendering the spots quite opaque and conspicuous. They are slightly more noticeable on the lighter, lower side of the leaf than on the upper side.

As the insects increase in size they suck out the parenchyma from larger areas, the spots then often measuring one-tenth of an inch in diameter. If one insect confines its attack to a single leaf for some time, or when more than one works on the same leaf, these spots often coalesce and frequently the whole leaf turns brown, curls up, and dies; being brittle, it is often torn and broken by the wind. (Fig. 1.) In 1892 the injury to the currants and gooseberries in the horticultural garden here reached this stage and the whole field looked as though a fire had swept quickly through and killed the terminal leaves. When all the tenderest leaves have succumbed, the insect continues its attack on the older leaves lower down. During its lifetime a single insect will destroy at least two or three currant or gooseberry leaves. This accounts for the fact that the injury wrought often seems much out of proportion to the number of insects at work.



Currant Leaf, showing the characteristic spots made by the insect, natural size.

When the insects are very numerous, the growth of the shoots is often checked, they droop, wither, and die. Some have thought that this blasting of the growth was caused by a poisonous saliva which the insect injected into the wound made by its beak. However, it is more probable that the shoot dies or its growth is checked on account of the death of its breathing organs—the leaves. On the currant, gooseberry, and many other plants the insect confines its attacks to the leaves, but on some ornamental plants, as the dahlia and rose, the most frequent point of attack seems to be the buds. This peculiar phase of the attacks of the pest has been described in the discussion of the past history of the insect.

The adult insect; its natural size represented in small figure at the right.

Briefly stated, our observations upon the life history of the Four-lined Leaf Bug show that the nymphs appear in the latter part of May, upon shrubbery plants, where they continue to feed upon the tender leaves for two or three weeks, undergoing five molts. The adults appear early in June and often spread to different surrounding succulent plants. Egg laying begins in the latter part of June; the eggs being laid in slits, cut in the stems of shrubs near the tips of the new growth. The adults disappear in July and the insect hibernates in the egg. Only one brood occurs each year in our State.

The Four-lined Leaf Bug is not an easy pest to control. The new light thrown on the habits and life-history of the pest by our observations during the past two years shows that several of the preventive methods heretofore recommended are practically useless. More caution should be used in recommending remedies or preventives when so little is known of the life-history of the insect.

The food of this pest consists only of the juices of the leaves or buds of the plants upon which it feeds. It is not provided with biting jaws for masticating its food, as are many other insects, like the Potato Beetle, grasshoppers, and caterpillars. But, as we have seen, its mouth parts are formed into a beak, through which it sucks its food, as does the Pear Psylla, the Squash Bug, Plant Lice, and all the other true bugs. As Dr. Lintner has said: "It is evident, therefore, that these insects, living as they do, upon the sap of plants, may not be destroyed by means of poisons applied to the surface of the leaves. The delicately pointed sucker would penetrate the poison, even when thickly coating the leaf, without imbibing any portion of it." Thus the application of Paris Green, London Purple, or any other poisonous substance, would prove of no avail against the Four-lined Leaf Bug.

A—Section of Currant Stem showing eggs in position; e, egg, greatly enlarged. B—Tip of new shoot of currant, showing several white egg clusters in the stem near its center, natural size.

Some have thought that applications of dust, lime, ashes, soot, soapsuds, tobacco water, carbolic acid washes, etc., might be effectual. Dr. Lintner says, however, that they have, on trial, been found ineffectual. Walsh and Riley thought that "the plant might be protected against their attacks by a proper use of cresylic acid soap." Experiments have been reported, in which a very strong solution of this soap was used upon a closely allied insect, the Tarnished Leaf Bug (*Lygus pratensis*); it was entirely ineffectual and would doubtless prove useless against the Four-lined Leaf Bug.

The only insecticide with which we have experimented against this pest is kerosene emulsion, the cheapest and most effectual insecticide yet found for sucking insects.

To make the emulsion, thoroughly dissolve one-half pound hard or soft soap in one gallon boiling water. While this solution is still very hot, add two gallons of kerosene, and quickly begin to agitate the whole mass through a syringe or force-pump, drawing the liquid into the pump and forcing it back into the dish. Continue this for five minutes, or until the whole mass assumes a creamy color and consistency which will adhere to the sides of the vessel, and not glide off like oil. It may now be readily diluted with cold rain water, or the whole mass may be allowed to cool when it has a semi-solid form, not unlike loppered milk. This standard emulsion if covered and placed in a cool dark place will keep for a long time. In making a dilution from this cold emulsion, it is necessary to dissolve the amount required in three or four parts of boiling water, after which cold rain water may be added in the required quantities.

In June, 1892, an adult was sprayed with the emulsion, diluted with 25 parts of water. The insect dexterously wiped off with its hind leg a large drop which had accumulated on its back, and went its way uninjured. Several adults were then sprayed, care being taken to wet them all over, with the emulsion diluted but five times; some of them seemed "sea-sick" for a few minutes, but in an hour all were as lively as ever. Adults sprayed with the emulsion diluted with three parts of water were nearly all dead the next morning. Undiluted kerosene killed them in a minute or two.

Portion of Currant Stem showing three white egg clusters, much enlarged.

This year the emulsion was tried on the nymphs when about one-half grown. When the emulsion was diluted with 10 parts of water it had but little effect. But when only five parts of water were used, and the spraying was thorough, the nymphs died in a minute or two.

Prof. Cook reports as follows in regard to the use of kerosene emulsion against the pest in Michigan in 1891: "We sprayed these striped currant bugs on the bushes and in the laboratory with kerosene emulsion made with both hard and soft soap and with pyrethro-kerosene emulsion."

Prof. Cook's emulsions contain one quart of soft or one pound of hard soap dissolved in two quarts of hot water and one pint of kerosene added. This is diluted with an equal amount of water when it is ready for use. This gives nearly seven per cent. of kerosene in the dilution as applied; or about the same amount of kerosene that the Riley-Hubbard emulsion has when diluted with nine parts of water. The excess of soap in Cook's emulsions may increase their insecticidal value as used against the Four-lined Leaf Bug. In the pyrethro-kerosene emulsion one gallon of kerosene is filtered through two and a half pounds of pyrethrum powder, and the filtrate is used in the same manner as kerosene in making the emulsion.

"There were almost too few bugs on the currant bushes to make the experiments satisfactory, but in the field and in the laboratory both applications killed the insects, and the bushes in the garden were freed of the blighting bugs."

The best and most effectual time to apply the emulsion will be before the insect has reached the adult stage; that is, while they are still nymphs. As the adults begin to appear the first week in June, the spraying should be done the last week in May or as soon as the bright vermilion red nymphs are seen on the

1.—Nymph recently hatched; first stage. 2.—Nymph after first moult; second stage. 3.—Nymph after second moult; third stage.

bushes. With the insect thus destroyed in its nymphal stage, the buds of dahlia, rose, and the leaves of other herbaceous plants would not suffer from the attacks of the pest if, as the records indicate, the adults alone are responsible for this injury. The insect in all of its stages is so very active that the spraying must be very thorough to be effectual.

We believe that the evidence in favor of the effectiveness of kerosene emulsion is sufficient to recommend it as a practicable method of combating the pest, especially where large areas of an acre or

4.—Nymph after third moult; fourth stage. 5.—Nymph after fourth moult; fifth and last nymphal stage.

more are attacked. In brief, then, for large areas where some of the mechanical means to be discussed would seem too costly, we would recommend the application of kerosene emulsion (Riley-Hubbard formula) diluted with not more than five parts of water to the shrubs, where the nymphs will be found at work, not later than the last week in May. One thorough application at this time, till it drips from the bushes, will not injure the foliage or fruit, and will, we believe, destroy a majority of the nymphs, and thus protect the herbaceous plants from the attacks of the adults. Do not wait until the adults appear before beginning to spray; watch the shrubs for the nymphs.

TRUCK RAISING.

Go South, Young Man, Where Money and Independence Await You.

No kind of farming pursuit is more profitable in the South than truck or market gardening, with its several side issues, and no country which offers better opportunities for its being successfully carried on. Her climate is all that can be desired, her soil is of the right kind, she has precipitation equal to her needs, and transportation facilities which fill every want in bringing her products to the principal marts of the whole country. Her lands may be purchased at very low prices, although there are plenty of truck farms in the immediate vicinity of Mobile which could not be purchased at $100 per acre, as many years the profits per acre are considerably in excess of that amount. But where the land has not been tilled, with equal quality and just as favorable shipping rates, the price is within the reach of anyone. This is particularly true of the long-leafed yellow pine district, which is especially adapted to the raising of all kinds of vegetables as well as fruits, the land being easily tilled and having a good subsoil to make fertilizers give the very best results. Grapes, pears, peaches, and such other fruits grow to perfection, while the profits from vegetables grown make the farmers thoroughly independent. There is no limit to what the farmer can grow in the South. He may be said to be as nearly independent of the rest of the world as man can possibly be. He grows his own cotton, raises his own sheep, cattle and horses, produces his own breadstuffs, can make his own sugar and molasses, raise every kind of fruit, and there is but little except his coffee and tea, and for these he finds in his well cultivated fields what is nearly a substitute, especially for his coffee. He should grow the best of each thing required, and with care the profits will be much greater. The truck farmer, however, requires a more continuous market for his products, and this he has within his reach. If he will only engage in establishing canning factories, every surplus article will go to swell the aggregate. The cost of a canning factory is no great matter, and the profits are sure, especially when located in the vicinity of an established truck farm business, as there it will have an active life the greater part of the 12 months each year. Steps are being taken to start several in the immediate vicinty of Mobile, and as this is the principal truck section in the Gulf region, there should be no lack of a continuous supply of everything required in season. The South is recommended to those who wish to become successful truck growers, as she has more to offer than any other part of these United States, 12 months in the year when you can till the ground comfortably, and see a marvelous growth going on. Ye who are in the frozen regions, come and get an insight into what the sunny South does in assisting the husbandman, and after seeing, become a possessor of soil that will produce for you anything you may require. Think of it, this land you can purchase at from $1 per acre upward.

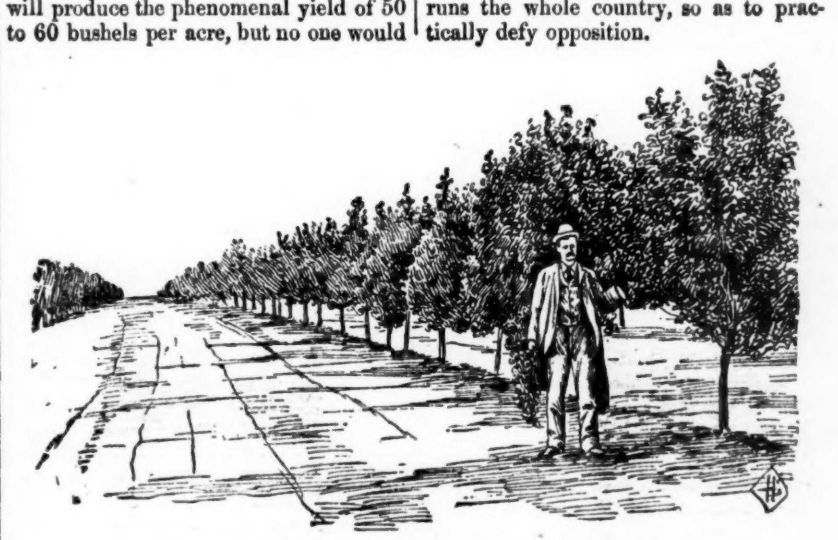
IRRIGATION IN WASHINGTON.

A Ditch 60 Miles Long, Which Irrigates 64,000 Acres.

THE STATE of Washington has as much diversity of climate as it has of surface, for the western part has a very wet climate, with the largest annual rainfall of any part of the United States, the central section has a dry climate, so dry in fact that though the soil is extraordinarily fertile yet it does not nourish not even grass. Still further east, on the western slope of the Cœur d' Alenes, is another belt of plentiful rainfall. The two wet parts of the State are covered by the finest forests of the Union, while the central and dry part is destitute of timber. It was to this latter section of the State, where one can stand and look from a dry climate into the wet belt along the Cascade range, and where, though he is surrounded by a vast prairie, billions of feet of the finest timber are in sight along the mountain slopes, that the writer made a trip lately to examine and study irrigation under the great irrigation canal completed the last Summer in the Columbia Valley. The Yakima River, which carries a rolling flood of cold, clear water the year around from the glaciers and snow peaks of the Cascades across the Sunnyside Plain to Columbia, has been diverted near Zillah and a large segment of its volume carried in a canal 30 feet wide on the bottom, 60 feet wide on the top, and from 10 to 15 feet in depth, over what was originally a sage brush plain. It is large enough to float a small steamboat, and it is an impressive sight to follow its serpentine course as it winds over the plain at an inclination of five inches per mile, getting ever and ever farther back on the "bench" away from the Yakima River. Forty miles by the course of the canal and 25 by the section lines east of its inlet from the river it has nine miles of land between it and the river, and thereafter it is crowded by a range of hills closer to it until it is only three miles away at the point where it terminates on the prairie 60 miles by its windings from its beginning. It cost $550,000 to build it, and as much dirt was moved in digging one mile of it as in grading 10 miles of railway. The land it will reclaim amounts to 64,000 acres, or as much as a small County in the East.

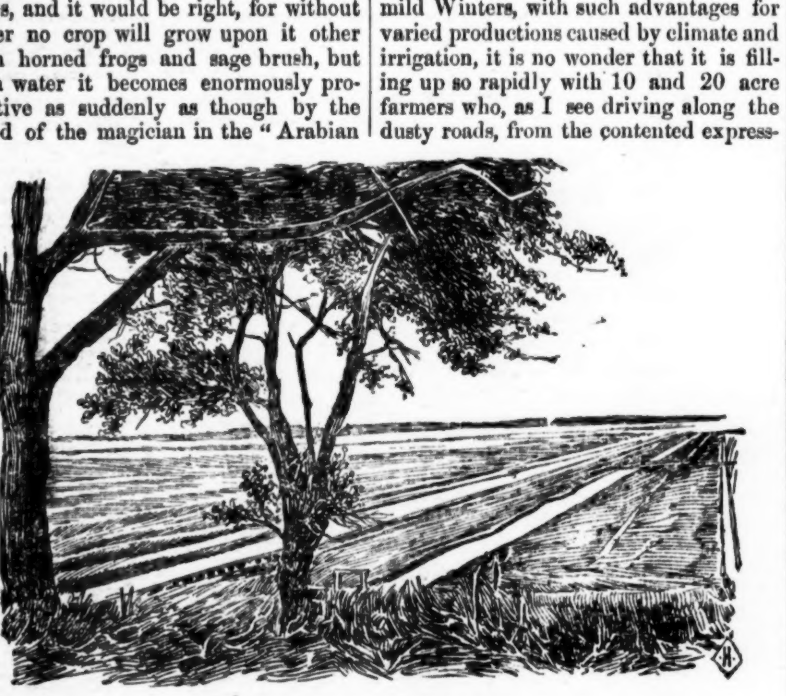
In no branch of human endeavor is the genius of mind over matter more strongly displayed than by irrigation. Before the vivifying fluid is led over the land the Eastern mind would conclude that it was not worth a cent a thousand acres, and it would be right, for without water no crop will grow upon it other than horned frogs and sage brush, but with water it becomes enormously productive as suddenly as though by the wand of the magician in the "Arabian Nights." So I thought as I left the train at Toppenish and drove over the dry sage brush flat between the track and the Yakima River, on the side opposite to that where the canal is built. The soil lay, yellow, dry, and glaring, under the warm sun. There was not even a blade of grass to relieve the parched, monotonous landscape, and it was a welcome relief when we entered the timber and moist, sub-irrigated lands along the banks of the river. Across the river and on the high "bench" on its northern side we suddenly came upon the irrigated lands brought under the Sunnyside Canal two years ago. Here all was green with growing crops, and the fruit orchards, hop yards, and alfalfa fields growing in lands fat with moisture, which presented a most refreshing contrast to the land in its natural state before water has been carried upon it. On one side where water has been carried over the land are crops of a luxuriance and perfection only seen where irrigation is practiced, while it may be but a step to barren unproductiveness, so potent and necessary is water to give the land value for the production of crops.

That the conditions of farming are radically different from Eastern farming methods, under the irrigation system, is apparent. In the Mississippi Valley farms of 160 and 320 acres, and even larger, are cultivated by one owner. Here 10 and 20-acre holdings are the rule, and everything over 40 acres is exceptional; as much so as several thousand acres to one owner would be in central Illinois. This is caused by the fact that here the crops raised are of a character that bring a very large return per acre and require an amount of attention that will keep a man as busy on a 20-acre tract as one 10 times as big in the East. In addition to the fruits and vegetables wheat and the other grains will produce the phenomenal yield of 50 to 60 bushels per acre, but no one would think of growing them at 60 bushels per acre and 60 cents per bushel when hops will net $100 to $300 or more, and fruit from $100 to $600 per acre, according to the variety, season, and prices.



AN IRRIGATED ORCHARD OF APPLE AND PEAR TREES.

With rainfall eliminated and irrigation for reliance the problem of farming is much simplified. If rain is relied upon to mature a crop, it may be too dry and again too wet; any farmer knows that a season is rarely so evenly adjusted between the two that the best results can be obtained. And in a rainy climate the crop may be damaged and even lost after it is safely matured. The irrigator is saved these anxieties. So long as the water in the canal holds out he can put it on the land in such manner and at such times as may be best for the particular crop that is being grown. After it is ripe he can and does take his time, unvexed by harrowing anxieties, for he knows it "ain't goin' to rain." This is the argument here in favor of irrigation and in this country of long, warm, cloudless Summers and short, mild Winters, with such advantages for varied productions caused by climate and irrigation, it is no wonder that it is filling up so rapidly with 10 and 20 acre farmers who, as I see driving along the dusty roads, from the contented expression of their countenances, are not worrying over the question of whether they will have a crop or not, for they are their own "rainmakers," and by turning the water on or off they can make the crops just what they want them, and have them ripen soon or late according to their fancy, for with the water turned off the crop will ripen in short order under the warm sun of the Sunnyside Valley.—D. R. McGinnis, Zillah, Wash.



AN IRRIGATED FIELD.

Cheap Land in North Carolina.

EDITOR AMERICAN FARMER: I don't know of any place offering more inducements to the settler than this part of North Carolina. Land unimproved, with plenty of timber on it for building purposes—pine, poplar, linn, oak, etc.—can be bought in any quantity as low as $3 an acre. I know of 20,000 acres of it for sale in this County. This is a splendid County for fruit—apples, peaches, plums, cherries, and grapes.—Jack Arlidge, Saluda, N. C.

THE CANADIAN THISTLE.

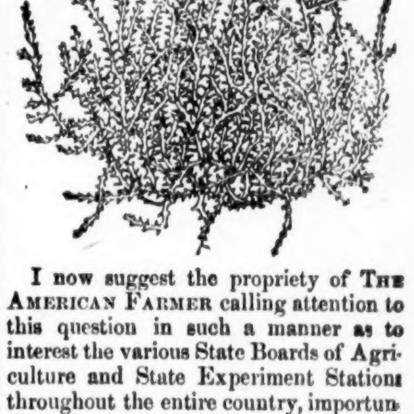
Urgent Measures Should be Taken this Winter to Eradicate this Pest.

THERE HAS BEEN considerable interest manifested in this question throughout the country since the appearance of my previous articles in your issues of March 1 and April 1 on Canada Thistles.

The evil is much wider spread than is generally supposed, and unless there is a determined effort made to stay its progress it threatens to polute the entire country.

The masses of the people are oblivious to the real danger, and something must be done to create a popular sentiment against the Canada Thistle and persuade or compel its destruction before it overruns the whole country, so as to practically defy opposition.

I recently brought this matter to the attention of his excellency, Gov. Pattison, of Pennsylvania, asking him to officially request the Department of Agriculture at Washington to take the question of "Canada Thistles" under consideration, with a view to its eradication.



I now suggest the propriety of THE AMERICAN FARMER calling attention to this question in such a manner as to interest the various State Boards of Agriculture and State Experiment Stations throughout the entire country, importuning them to assert their respective positions upon this question, stating what legislation and practices are needful to wipe out this evil.

Why would it not be the proper thing for the Department of Agriculture at Washington to assume the position of general headquarters for the consideration of this question? Let us demonstrate by practical experiments this Winter in every State where the Canada Thistle is found, just what treatment and applications will destroy the plants. It will then remain for Congress to come down with such legislation as may be needed upon the question.

Surely there are brains and enterprise enough among the American people to cope with this question, and place the Canada Thistle scourge in its proper place upon the pages of American history. To wit: Among the enemies which have evaded our free country only to die and be unknown.

If salt water, camp oil, spirits of turpentine, sulphuric acid, or any other agent will kill the Canada Thistle, let that fact be known to all the world and powers by abundant experiments. Then let the laws be so enacted as to require the remedy to be applied. It can and must be destroyed.—Jas. McCracken, Frostburg, Pa.

The practice of using eggs at Easter is of Hindoo origin, the egg being in India an emblem of immortality.

Yard Echoes.

Never be afraid of making too much manure. Such a thing can never happen.

When an animal is overfed there is not only a large loss of feed, but, in addition, there is a permanent injury done the animal.

Individual merit exerts a great influence in connection with a good pedigree in the colt which is intended to be used for breeding purposes.

The best thing a farmer can do is to teach a team to pull together. It can be easily done, and after accomplished is a source of much pleasure.

It is always a difficult matter to find a market for a poor horse, but not so with a well bred one. This shows that there is no money in breeding the former class.

It is a bad policy to feed hay to the stock which is worthless simply to work it off. If you have any such hay, the best manner of disposing of it is to use as bedding.

The fat percentage in a cow's milk cannot be increased by feeding fat; but by good and careful feeding the quality of milk after several generations of breeding can be almost doubled.

Black particles in wheat bran indicate weed hulls, and the grayish color is very suggestive of floor sweepings. To get the best bran one should select that which is of uniform color and clean and bright.

The British agriculturist fully realizes that he cannot compete with the farmers of America in raising cattle, but he has turned his attention to the improvement of his present stock, and the result we fully know.

It is shown by chemical analysis that wheat bran is worth more for feeding stock than whole wheat, the latter containing 9.3 per cent. of digestible albuminoids, while the former contains 12.6, or about 30 per cent. more.

Mr. John M. Stahl says that one of the most remarkable things in rural America is the exceptionally few dooryards and barnyards which are underdrained. He thinks that these are the first parts of the farm the farmer should attend to.

The breed is always stronger than the feed. This is something which it would be well for farmers to remember. An animal of one breed cannot be fed into another animal of a different breed. The quality of the feed is always bound to bring forth the best individual characteristics, but it never changes the animal from what it is.

In the report of the Massachusetts Board of Agriculture for 1861 occurs the following: "Johnston and Spregnal say that a cow annually voids about 16,300 pounds of urine, which contains about 961 pounds of solid matter, making the annual commercial value of the liquid manure of a cow to be $28.83." According to Drs. Dana and Nichols, the liquid manure is quite equal in value to the solid excrements. This would make the value of the solid and liquid manure of one animal worth $57.66, which statement is used as authority by the agricultural writers of to-day.

OUR FRIEND, THE HORSE.

Some Suggestions on the Sanitary Condition of the Stables.

BY H. FEDDERSON.

IV.

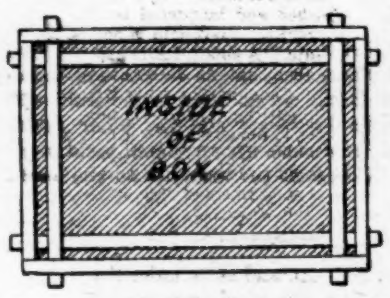
IN THIS concluding chapter I will begin with the stable. Let it be well ventilated, lighted, and not cramped. I think the earth floor the best, for the wind will whistle through the cracks of a plank floor in Winter, which certainly is not conducive to the horse's comfort when lying down or standing, and is generally the cause of his catching cold when coming in from a long drive.

Do not be stingy with bedding, and have a gutter for catching the droppings, insuring cleanliness of the straw. Damp bedding is not warm, and most cases of scratches and thrush are due to filfthy stables and muddy yards. Look your partitions and floors over frequently for nails. I have seen more than one horse with his eye torn out or badly injured, and his hide deeply cut, by rubbing against a partition where there were projecting nails. And rubbing is generally done to ease a dirty and itching skin, which in turn is due to an idle currycomb.

Never have a stable window directly in front of a horse, many cases of periodical and entire blindness can be traced to this bad custom. Besides, a horse is liable to break the glass, wound his nose, and may lacerate his gums by getting the pieces that fall into his manger and feed box into his mouth. Have the windows in each end of the stable, or from the rear, which will enable you to clean the gutter much better, and also to curry the horses quicker.

Do not use the high feeding racks; much of the dust and the seeds fall into the horse's eyes when they pull out the hay. A solid box raised six inches from the ground, and as high as to a man's waist, is the best; the horse cannot get his feet into this, and it will hold more hay than the rack. Do not leave old hay or grass in the manger to become moldy, which scents the fresh feed. Cushion the sharp edge and upper plank of the manger with an old pair of overalls or a gummy sack to prevent the horse's rubbing the hair off his breast and throat while feeding. Bare patches on his body are unsightly, and are handy places for gnats and flies to settle and bite.

The feeding boxes for grain should be about 12 inches deep by 20 long and wide, and should not have big holes in the bottom, which let out about one-third of the oats. Some horses habitually and when hungry run their noses into the oats and pitch it right and left. To prevent this, bore holes in all sides of the box close to the top; into these insert old pieces of broom handles like in accompanying cut. The horse cannot throw any feed out over these on any side.



Do not spare the brush or currycomb, and do not use a currycomb that has all its teeth worn off, nor a brush that is little better than an unplaned board. New ones cost but a trifle, and the proper use of them is very essential to the health of a horse. Do not rub over the body quickly because it is an unpleasant job. Curry and brush thoroughly, but do not scratch too hard with a new or sharp currycomb; it injures the skin, which is not cowhide. A tender skinned horse will flinch and become nervous when a currycomb is put on his back. For him use the coiled wire comb, and make more use of the brush. Do not curry him like a coarse, tough hided animal. The coiled wire comb is also the best one to clean the legs of horses that have been out on a muddy road; the sharp currycomb is too severe on the bony legs when long cleaning is necessary.

After driving on a muddy road, particularly when your horses are shod, rub their muddy legs, clean their hoofs thoroughly of dirt, which, if left, will cake as hard as wood and remain in for days, rendering the foot very offensive, which is neither pleasant to man nor conducive to the health of the foot. Horse's feet should be examined frequently. Many times in doing so I have found pebbles, hard sticks, and old nails pressed into the cleft of the frog; many cases of lameness and hoof disease are due to such causes.

Now, having described the stable, I will say, do not put your horses into it except in damp, rainy weather, and on stormy and extra cold days in Winter a healthy horse is at its best when enjoying perfect freedom, and the best of stables are more or less offensive. Much of this can be done away with by scattering lime in the gutters and throwing it against the sides of the stalls. Every good stable should have wire screens before the windows and screen doors, for every observing person knows how horses are tortured by flies and gnats.

Have a field where you can turn your horses out in Winter to play and exercise; have two or three good feeding racks, where you can throw in a load of straw, hay, and corn fodder, cut on a feed cutter, mixed and slightly salted twice a week. The horses then can get their own feed, are stronger and healthier for exercise and fresh air, and the constant outer air gives them a much heavier coat of hair. No farmer should be without a feed cutter; it saves feed, and all animals relish it better thus cut fine, and cannot destroy so much of it by pulling it out under their feet, and the manure rots and is fit for hauling out much sooner than if all feed is given as it came from the field.

I hope that in two years every inch of barbed wire in the United States will be broken, cut up, rusted, and thrown into the pit. How many fine horses have been so torn by wire as to necessitate their being shot; thousands annually are crippled or made unsightly for life by great scars, which are a source of trouble and expense until healed. Better to build a rail or board fence than wire. But there is a remedy. Woven wire fences are safe, handsome, and are becoming cheaper every year.

(*The end.*)

Waste in Stock Feeding.

The North Carolina Experiment Station has been investigating the waste in stock feeding, and the last bulletin says: "North Carolina has, according to the last Auditor's returns, 133,784 horses, 110,700 mules, 646,241 cattle, and 1,292,856 hogs. There is no question but that vast quantities of food are wasted annually by improper feeding. If we suppose that 15 cents per month is so wasted for each animal, and this sum is entirely within reason, we have the total of $3,948,445.80 per year, which is approximately one-sixtieth of the assessed value of the total real and personal property of the entire State. Ought not stock feeders, therefore, to carefully investigate these questions?"

Pen Notes.

The compact and early maturing breeds are said to pay the best of any.

It stands to reason that the cheaper fat is added to the hog the more will be the profit.

Thumps are often caused by feeding the brood sow too much whole corn while carrying a litter of sucklings.

Have the boar penned up securely so that he cannot mingle with the sows. This is the only way to care for him until wanted for serving.

Cooked roots and meal is considered a very good ration for the swine after the ground is frozen so hard as to prevent the animals from rooting.

A mixed ration is always preferred for the animals which are being fattened, as it serves to keep them in better health and keeps up the appetite.

Ruta-bagas are excellent for hogs. So are beets, parsnips, potatoes, and carots. But when these are fed it is well to accompany them with a grain ration.

Prof. Henry says that if the fattening period is not too long continued that a bushel of wheat will add from 12 to 14 pounds to the weight of an animal.

The hog suffers more from exposure and cold than any other animal on the farm. Provide him with warm and dry quarters, with plenty of bedding and furnish an abundance of heating food.

Those who bred the sow so as to have the farrow late in the Fall are now able to see the great fault of so doing. It is extremely difficult to secure a thrifty growth with young pigs in very cold weather.

Always have plenty of good drinking water for the pigs. Because they may receive all the dishwater and soapsuds, do not think that this is enough. It only serves to increase their thirst, due to the peculiar construction of their digestive organs. Give them at least once a day all the pure water they can drink.

Duroc-Jersey Hog.

This illustration represents Exchanger 159N (2539A), a boar heading the herd of J. M. Stonebraker, of Panola, Ill. His weight in ordinary flesh is 900 pounds, but in spite of this he is as active as many pigs. He took first premium in class at the St. Louis Fair, and was first in class and sweepstakes over all other breeds at the South Dakota Fair, being the only Duroc-Jersey hog that was ever known to accomplish this latter feat.

A Cure for Hog Cholera.

EDITOR AMERICAN FARMER: It is a good thing for your paper to give receipes to cure diseases of different cattle. The best remedy for hog cholera that has been found is soda and molasses, and the use of polk root in their drinking water.—W. F. WOOLEY, Troy, N. C.

The Piedmont Region of the South—"The Best Country Under the Sun."

After the war a heavy emigration began to the West from all the Southern States, which continued several years. In late years, however, the movement has been reversed, and people are leaving the West and are settling in all parts of the South. The experience of those who have lived in both sections is that while the yield per acreage is not so large in the South as in some parts of the West, perhaps, yet the net profits for a series of years are quite as satisfactory and life far more comfortable, as the farmer does not have to contend with frequent and protracted drouths, destructive cyclones and caterpillars, and long, dreary, and severely-cold Winters. Taking into consideration the climate, especially that of the Piedmont region of Virginia, the Carolinas, Georgia, and Alabama, traversed by the Richmond & Danville Railroad system, with its advantages of good markets, cheap lands, pure water, and perfect school systems, unquestionably the "Best country under the sun," especially for the tiller of the soil, the manufacturer of cotton, woolen goods, and tobacco, is that situated between Washington, D. C., and Birmingham, Ala., along the eastern slope of the Blue Ridge Mountains, where all classes of citizens are prosperous and happy and a good livelihood can be had with minimum exertion. Outdoor work can be done every day in the year, and storms, destructive alike to life and property, are not feared as in other sections of the Union.

Map folders, showing time schedule and extent of Richmond & Danville system of roads, and circulars descriptive of land, climate, etc., can be had on application to the Passenger Department, Richmond & Danville Railroad, Washington, D. C.

See our remarkable offer on another page.

SHEEP AND WOOL.

Shearings.

Sheep should have access to water at least twice a day, and where they can have it at any time is much better.

Membership in the American Southdown Breeders' Association is continually growing, and applications for registry of animals for Vol. V, of the record indicate that that volume may be sent to the printer about Jan. 1. Breeders are taking advantage of the rule lately adopted that permits the registry of lambs dropped in 1893 at one-half price, provided they are recorded before Jan. 1, 1894.

The veteran Southdown sheep breeder, Hon. C. M. Clay, White Hall, Ky., in writing of the increased interest in Southdown sheep, says: "I am glad to believe that the future of the magnificent Southdown is on the road to a higher and wider appreciation and usefulness in the world. Our thanks are especially due to Mr. S. E. Prather for the faithfulness and work of love which he has rendered our cause."

The English papers tell the following story of a badly malformed lamb: "W. Hewitt, of Harrington Mills, has a ewe which this Spring weaned a lamb that is certainly curiously and wondrously made. It has two eyes, both in the center of the forehead, and in a single socket, both covered with one eyelid. One ear is situated at the back of the head, and the other directly under the lower jaw, near the hinge. It has no tail, but in the place of that very necessary appendage a fifth leg, almost as long as the other four, fully equipped with hair, hoofs, etc. It was living at last accounts, being almost three months old."

In addition to the large cash premiums that the American Southdown Association offered at the World's Columbian Exposition, special premiums of the four first volumes of the American Southdown Record were offered in the several States and in the Canadas for two recorded Southdown lambs—one ram and one ewe. Believing that these offerings have been a benefit to the Southdown interests in that it has placed these sheep prominently before the people, and their reputation for hardiness and for the best quality of mutton thus brought to the attention of farmers, and small stock growers, it is with particular pleasure that the American Southdown Breeders' Association has sent a set of the volumes of its record to the following breeders, who won these premiums in their respective States: W. E. Spicer, Harvard, Neb.; C. C. Shaw & Son, Newark, O.; F. W. Barrett, Wadsworth, N. Y.; John Jackson & Sons, Abingdon, Ontario, Canada; Robert Shaw & Sons, Glanford Station, Ontario, Canada. Breeders in other States than those above mentioned who were successful in this competition should make early application to the Secretary of the American Southdown Breeders' Association for the volumes of the record to which they may be entitled.

HINTS ON THE SUBJECT.

How One Successful Sheep Raiser Started and Progressed in the Business.

EXCEPTIONS frequently break a standard rule, and in sheep raising where one man may fail there possibly may be another who possesses such tact and energy that he is bound to succeed. Such a man as this is L. M. Hartley, of Salem, Iowa, and from a small beginning nearly 20 years ago he has steadily progressed until now he is one of the best known breeders of Shropshires in the country. In connection with his business he publishes a pamphlet on "Hints on Sheep Raising," and from this we publish the following, believing that the practical experience of a practical man is at all times the best:

"My first experiment in sheep raising commenced in 1876 with about 300 head of Merinos. I provided for them sheds of sufficient capacity to cover them. These sheds were built of lumber, well ventilated and boarded up on three sides, the south being left open. I provided racks for hay; I fed oats and corn, with plenty of good timothy hay and clover. They also run to hay and straw stacks. I handled them with dogs, as most men do, and thought the dog indispensable to sheep farming. I now think him a greater nuisance than the sheep shed. I procured the best bucks that the country afforded. I handled these Merinos for some years, and the best increase I could get by this management was 60 per cent.; the clip run from 9 to 11 pounds per head; the price obtained for the wool was from 17 to 22 cents; the lambs brought me in market from $1.50 to $1.75 per head.

"After running this flock for three years I got hold of 100 head of the big, long-legged, coarse-wooled, woods sheep. I got them because they cost me almost nothing. I put them on the back part of my farm, away from the fine-wooled sheep, where they ran during the Winter to hay stacks and on meadow. They had no care nor was there any running water in the pasture. My Merinos had good well or spring water each day.

"These coarse-wooled sheep were all with lamb when I got them, and commenced dropping their lambs in February and were done by the middle of March. To my astonishment I found that they had increased 150 per cent., neglected as they were, and when the lambs were ready for market I realized on them, at weaning time, $4 per head. The clip from the old sheep was only about four or five pounds each and brought me 25 cents per pound. This experiment satisfied me that there was a better sheep for mutton than Merinos, to say the least. I was not satisfied with the coarse sheep on account of the small production of its wool, but, for the increase, no one could ask a better showing.

"The manner in which these coarse sheep had been treated also gave me the idea that sheep would do better to be reared as nearly in a state of nature as possible, so as to give them food and care at the proper time, and also that a breed could be found that would thrive and take care of themselves and at the same time produce a good yield of wool and make a fair increase, and be more prolific in the pounds of mutton produced. With these facts before me I investigated the merits of the different breeds and procured some Cotswold ewes and also obtained four full-blood Shropshire bucks, the best I could find. I let them go to the Merino and Cotswold ewes. I found the increase from the Merinos to have gained 40 per cent, and the Cotswolds a still greater gain.

"I kept my sheds for another year after getting into the Shropshires, but I found that sheep on remote parts of the farm, away from the sheds, did the best. I found that in the Summer time they would come into the sheds and stamp and fight flies all day, filling their heads with dust, and that they would contract a cough and crowd together to their noticeable detriment. I finally fenced them from the sheds. I still kept the sheds for the sick and weaker sheep, but I found that shedding even sick sheep did not help their condition in a general way. I found that if you have a lot of weakly sheep, shedding is the worst expedient that can be resorted to. A clean, new pasture in grass time, and in the Winter a fresh field which sheep have not been using, with good wholesome food and pure water, far surpasses all nursing and doctoring that you can bestow. I give in these cases bran, oats and ground oil-cake. Proper troughs must be provided to keep this feed dry. This mode of operation will soon make good mutton of your sick sheep, while shedding is almost sure to kill half of them.

"Finally, about 10 years ago I became convinced that shedding for sheep was expensive and worthless; in fact, a decided detriment to sheep raising. Shade is as necessary in Summer for sheep as feed, but it should not be obtained in a closed sheb. Trees or hedges are far better. If a shed is built for the purpose of shade only, it should be built high and open, of small dimensions, and on elevated ground, so sheep will all the time get air without being crowded in flocks.

"I finally tore all sheds down, and find that I never did anything in the sheep enterprise that contributed so much to the advantage of sheep culture. It has opened up a new era in handling and successfully raising sheep.

"Formerly, under old management, we lost over 10 per cent. of aged sheep when we provided sheds for them during the Winter months, from October to May. Now the loss does not amount to one per cent. during the period named. My flock clips on an average 10 pounds per head. The increase is about 125 per cent. in large flocks. I run them in flocks of about 1,000 or so, except in lambing time, when 100 to 150 ewes are kept together.

"There is no animal known that has been provided by nature with such a protection against cold as the sheep, and the Shropshire does not come in contact with either cold or wet that chills him through and causes him to sicken and die while he is kept in the proper condition. No snow storm affects him, neither does the falling rain. Nature has provided him with a protection that wards off the inclemency of the weather. I found that the Cotswold would take water into his fleece and carry it a long time to his great discomfort. The Merino's fleece does not take water so much, but his constitution is too feeble.

"When the snow storm comes you must, in the evening, bed a sufficient piece of ground behind some windbreak, such as a hill, hedge, grove, orchard or the like, for them to lie upon, and if it continues to snow you must continue to bed with straw each evening until the snow stops, and then your sheep have a bedding place for some time, or till snow comes again. Your sheep treated in this manner will arise from his bed and shake off six inches of snow from his fleece and feel fresh and vigorous and meet the wagon loaded with hay or fodder half way. When it rains, let it rain. If you have a good blue grass sod the Shropshire will take care of himself and keep his skin dry and his lungs healthy. A poor sheep has but little oil in his wool and his fleece will take in water and he will sicken and die, and a shed will not save his life. So you see that much depends on feeding; in fact, this is the great care required.

"In lambing time great care is necessary. If the weather is good and a lamb is four hours old, all danger is over. Shepherds should continually visit the flocks of ewes both day and night in bad weather and be prepared with ambulances so they may remove the ewe about to lamb, or the one that has just done so, to a dry, warm room and care for her and the little ones till the storm is over.

"In feeding the common flock I have discarded altogether the hay rack, nor do I allow the sheep to run to hay or straw stacks, as it is detrimental to both the sheep and the fleece. The blue grass sod is preferable on which to feed hay, or corn in the ear. In fattening for market I use the self-feeding trough.

"In feeding sheep be careful not to feed them too frequently in the same place, as their breath will spoil their food and render it unpalatable to them. One of the most essential requirements for successful sheep raising is that they constantly have pure, fresh water. Running water is much preferred, as sheep are very particular about what they drink, and if dirty or stagnant water is offered them they will suffer from thirst before using it, and if compelled to drink it will become diseased. In my opinion more sheep become diseased from impure and improper watering than from any other cause, except the crowding them into sheds.

"I cannot lay too much stress upon the necessity of properly watering the sheep in the Winter time. I have often been asked by persons who believe in the method of keeping their sheep shut up in close, warm sheds, how sheep can be made to drink when they are taken out for that purpose. This is a hard question to answer, as sheep that are kept in a warm shed are chilled as soon as the cold wind strikes them, and they will draw up, refuse to drink, and try to get back into the shed. The person watering them concludes that the sheep are not thirsty, so he puts them back into the shed and they go for another day without water. Now, if the sheep does not drink he will not eat, so he goes without either until he becomes sick and feverish and finally dies.

"Every pasture in which sheep run should be provided with proper self-feeding salt troughs, which will protect the salt from the rain; and in Summer seasons these troughs should be so provided with pine tar that the sheep must get it on their noses. This will prevent their being bothered with the gad fly. No animal suffers so seriously from bad water, bad air, filth, muddy yards, and dust as the sheep. They are naturally cleanly, and if given a chance will keep themselves clean. For this reason the salt trough referred to should be frequently moved from one part of the pasture to the other, thus changing the sheep to fresh pastures which have not been run over by them and thus giving the parts they have learned to frequent a chance to freshen up.

"If this method of feeding, salting, watering, and pasturing the sheep was adhered to, 'sheep dips' would go out of the market and their advocates would not be heard from. No man can afford to allow his flock to get into such shape that they will need dipping. Since I have dispensed with my sheds, given my sheep plenty of pure air and water, with good wholesome food, and plenty of it, I have never been bothered with my sheep having ticks, foot rot, scab, cough, lung disease, nor 'paper skin.' I can demonstrate the fact that ewes running on good pasture in open fields in Summer and Winter and never shedded or yarded will grow strong, fat, and healthy, and their progeny will be stronger, healthier and better than the progeny of any sheep that are compelled to spend half of their time in a close shed or yard. Their offspring will stand 35 per cent. more cold than the puny thing that comes from the housed-up ewe. If the money that is spent to-day for sheds was spent for barbed wire and high posts, and used to build fences with 15 wires and so close together as to keep dogs out, it would save millions of dollars' worth of sheep that are killed by dogs or lost by shedding them, which is equally as bad.

"About six per cent. of the sheep in this country are killed by worthless curs, and 50 per cent. are more or less injured by being chased and frightened, as they will not thrive after being chased by dogs. The best way to poison a wolf that has killed your sheep is not to remove the sheep that are killed, but place strychnine in them and for a few nights take your flock out of this pasture, so that when the wolf returns, as he certainly will, he cannot find live sheep to chase and he will return to the ones already killed and you will be almost certain to catch him within four nights. This rule holds equally good concerning dogs.

"If you would have your sheep healthy you must see that they have exercise, and plenty of it. This I believe to be conceded by all sheepmen, for I have seen contrivances such as spring boards and other devices that have been invented by sheepmen for exercising sheep, but I have never yet discovered any artificial means for exercising them that suited me. Sheep that are protected by such fences as I have soon learn that they are perfectly safe on any part of the farm and wander around at their will, and I often find them, during the hot Summer months, grazing at the hour of midnight. While sheep can stand the cold they cannot stand the heat, and if yarded at night they are prevented from grazing at the only time when they are desirous of doing so.

"My experience has been that the best way to feed our common sheep is to feed them in the open pasture on good, blue grass sod, changing the place of feeding often, and giving them through cold weather at least one ear of corn to the head; the best way to feed this being on the stalk, as I consider the fodder indispensable. For roughness nothing is better than clover hay. To fatten sheep properly you must have the self-feeding trough, as by this means you can feed shelled corn, bran, oats, and oilmeal, and the proportion given should be about two parts of shelled corn to one part of the other kinds combined. There are other kinds of feed equally as good as the ones mentioned, but none so good that are as cheap. There is no better food for the weaning lambs than pumpkins. Should your lambs be scouring keep your self-feeding troughs filled with bran, shorts, and oats, equal parts, and your lambs will not only stop scouring, but will commence to fatten at once. There is nothing that the sheep like better than pumpkins, and one in the sheep business cannot raise too many of them.

"Our Shropshire ewes often have triplets, but we never permit more than two lambs to run with the mother. We put the third lamb with a ewe that has lost her lamb, and in order to get the ewe to claim this lamb we place the skin of the dead lamb on it for a short time and the ewe that has lost her lamb will soon take up with it, when the skin of the dead lamb may be removed. In case we have no ewe that has lost her lamb we take the lamb and keep it on cow's milk until such a ewe can be had.

"Castrating and docking should always take place under 15 days old. Tincture of iron should always be used for docking, but never for castrating.

"In coupling, the ram should be put with ewes not more than two hours in the morning. Ewes should be driven to a yard where the ram is. Before turning them in attach a long light rope to the ram so that he may be easily caught, without heating his blood or exciting him. In two hours take the ram out and put him in his pasture, where he cannot see or worry about other sheep. We do not recommend the breeding of ram lambs. Although they can serve a limited number of ewes without serious injury, it checks the growth to some extent.

"I am fully aware that my ides on this question are not in keeping with the theories that have been advanced by sheepmen, but I can only say that experience has been my teacher and I have my flock to show people what I have been able to do. I commenced on a very limited number of sheep at a time when I thought that the larger flock one had the poorer in proportion the returns would be. I had been taught this and believed it, but under my present method of handling my sheep I can keep thousands with less labor and worry than I formerly kept hundreds, and I am certain that the ones kept in flocks of 1,000 or 2,000 do better than those kept in flocks of hundreds and handled in the old way.

"If a ewe has two lambs in the open field she will stay with them. But if she is put into a yard at night and has these lambs where there are other sheep, some of which may also have had lambs during the night, you will find on opening the gate in the morning that the ewes with the twin lambs have lost many of their offspring and you have many orphans on hands, which, if not already dead, will never be claimed by their mothers. This may happen by the sheep being so crowded the lambs rub together and their mothers do not know them. Again, if the ewe should have both her lambs with her in the morning when you are ready to turn them out, she will probably crowd out of the gate, as sheep usually do, and run to the far end of the pasture, leaving her lambs both behind. I know cases where hundreds of lambs have been lost in this way, and it behooves some one who believes in the close shed and yard system to invent some means of compelling the ewe to come back and claim her lambs."

Prize-Winning Cotswolds.

The illustration represents a pair of extra-fine Cotswold sheep, owned by George Harding & Son, of Waukesha, Wis., which have captured prizes at the Des Moines, St. Paul, Milwaukee, Indianapolis, Peoria, and St. Louis Fairs. Premier Earl 5911 is three years old, and was shown in the aged class throughout the circuit without a defect, and was as often sweepstakes as second at Royal 6016, the first premium yearling at same fairs and sweepstakes three times. Autumn Rose 5697 was first prize two-year-old and four times sweepstakes ewe any age.

HARD TIMES BARGAINS.

No. 1. No. 2. No. 3.

No. 1.—Here's a dandy little overcoat, made of Union Cassimere, suitable for hard wear and good cold weather, in a large assortment of patterns, lined and excellently finished, detachable cape; sizes 4 to 14 years, $2.50. To be delivered by express, receiver paying charges.

No. 2.—Pretty girls' dress, made of all-wool flannel, neatly trimmed with feather-stitched braid, empire ruffle front, bishop sleeves, well made and finished, lined throughout. Excellent wearing quality, suitable for school, street, and house wear. Can be had in navy blue, brown, or cardinal. Sizes from 4 to 14 years, $2.75, postage prepaid. Delivery guaranteed.

No. 3.—Special Boys' Outfit, made of Union Cheviot, excellent quality, Winter weight, in blue, black, or brown. Best make and finish. We have arranged with one of the largest clothing houses in the country to supply our subscribers with these outfits, consisting of a double-breasted coat, two pairs short pants of the same material, and Harvard cap of Union cassimere, with peak. These outfits are sold at retail for $3.50, and are excellent value at that. Wishing to give our subscribers an opportunity to secure a bargain, we offer them at the unheard-of-price of $2.50, postage prepaid. Sizes of suits are from 4 to 14 years; sizes of cap from 6½ to 7. Delivery guaranteed. Don't fail to take advantage of this opportunity.

Written for THE AMERICAN FARMER.

BECK.

A Country Girl's Disappointment in City Life.

BY SARA FRITTS.

IT WAS late June in western New York. The sun that morning shone brightly on the eastern slopes of many hills. Down one hill, steeper and more stony than the others, rumbled slowly a tin peddler's red cart. It seemed probable that the cart would run over the small, white nag hitched before it, despite the latter's energetic endeavor to hold it back. The driver on the seat was pulling bravely on the lines and calling sharply—

"Whoa, whoa there! Steady there! Whoa, whoa, I tell you!"

The horse stood still.

"Gitup! Gitup! What ails you?" And the whip was plied about the bony haunches.

The horse started up briskly under the smarting lash, and the cart wheels rattled over the road and into a lane, where stood a farmhouse, bold and bare, in the bright sunshine.

At the sound of wheels a black dog sprang up and ran at the vehicle, barking ferociously. Then a woman came and stood in the doorway, shading her eyes, with her hand, while a younger face peered over her shoulder. Soon there emerged from the kitchen window the head of another individual, who planted her bare elbows on the sill and swung a dishcloth to and fro in her hands.

"It's a tin peddler, Ma, and you was just sayin' tother day you wished one'd come along."

"Call off your dog!" roared from the lusty lungs of the man on the cart.

"Law, he won't hurt you," yelled back the eldest woman. "His bark's a sight worse than his bite. Shut up, Boxer!"

She threw a stone at the canine that hit the horse instead, causing it to shy suddenly and nearly upset man and cart.

Still the dog barked on.

"Rushy, take the broomstick to him," called the mother.

After receiving several vigorous blows, Boxer slunk away, leaving speakable silence behind him.

"Got any rags to-day?" asked the peddler.

"Well, I don't know; mebbe so. How much you give for 'em?"

"Cent and a half," laconically answered the man, swinging himself down from his lofty seat.

"Rushy, bring the bag that's in the woodshed. Then there's a basketful under the bed and a sack in the cellarway. Git 'em all."

The other girl left her post in the window and came toward the cart.

"What's you goin' to git with 'em, Ma? Say, I want a cooky cutter, one with scallops round the edge."

"You just shut up, Beck. I ain't goin' to git no tomfoolery. Go and help Rushy."

But the girl poutingly flung herself on the grass and watched the proceedings with no gracious eye. Rushy came with the collected paper rags. They were duly weighed and their worth estimated. Then the trading began.

"Hain't you got a dipper?"

"Yes, mum, here's one."

"That's too little. Give me bigger one."

"Biggest I have, mum."

"How much you ask for this er one?"

"Twenty cents."

"I'll give you 15. All it's worth."

So the bargaining went on. At last both buyer and seller were satisfied, and the peddler's cart rattled on down the road, carrying tinware to other housewives.

"Come, Beck," said the mother, as she turned toward the house, with her hands full of shining tin, "hurry up and wash them dishes. Then you can go to churning."

"I COULDN'T STAY AWAY."

"I ain't goin' to wash dishes nor churn neither. You won't git me nuthin' I want."

"Now, don't git mad just over a cooky cutter," her mother said, appeasingly. "I've cut cookies all my life with a knife, and I reckon you can."

But Beck, unheedingly, turned from the house and went down through the orchard till she reached a cherry tree that bore ripe fruit. Dexterously she swung herself into its branches. Up she mounted, limb by limb, till her grasping hand reached something unlike wood. She glanced up. It was a shoe, slim and shiny, with patent leather tips.

"Land a massy!" she screamed.

Down she slid, much faster than she had ascended, and all breathlessly stood on the ground again.

"I beg your pardon," said a voice from the topmost branches of the tree. "I beg your pardon, but the fruit looked so tempting as I passed that I stopped for some. Shall I come down immediately, or may I pick some cherries for you?"

"Who be you, anyway?" called Beck, truly frightened.

"I am visiting at Mr. Thornton's," answered the young man, complacently. "I was enjoying the fine morning in this garden of Eden, when 'the serpent beguiled me and I did eat.' Tell me, am I to be forgiven?"

"I guess you be, if you'll throw me down some cherries. Here, right in my apron. I reckon you're a city chap, by your smooth words, eh?"

"My home is in town, but I dote on the country. It's far nicer than the city."

"Pshaw, now! I'm crazy to live in the city."

"You wouldn't like it after this Paradise."

"I just know I would. I never was to the city but once. That was when Pa and me took the butter out. I only saw Market street, then, but I've been wild to go again ever since."

Beck had a ferocious appetite for cherries. She ate till the young man, tired of his bargain, descended from the tree and sat on the grass. Beck chattered on. He looked at his watch.

"I declare, it's nearly 11, and I was going fishing this forenoon. But really, I'd rather be here."

"Beck, Beck, where be you?" called a voice from the house. "The potatoes ain't peeled nor the churning done. Come right away."

Beck shook her finger at her companion with an odd grimace and sat silent.

Then the voice was heard calling in an opposite direction.

"Is your name Beck?" he asked.

"Yes, and I hate it. It's Beck here, and Beck there, and Beck do this all the time. I just balked this morning. I s'pose I'll have to do the churning, though, cause Pa said I could go to the city with him again if I churned this Summer."

"Far be it from me to detain you from duty." He rose to his feet and made a sweeping bow.

"Be you going? "Don't go," she said.

"I am perishing for a drink of water. Could I get some about here?"

"Up to the house, I reckon there's a well full. Come on." Beck sprang to her feet and led the way through the trees.

"Won't Ma and Rushy look, though, when they see me walking with you?" And Beck gazed on her companion proudly as they neared the house.

Her mother and Rushy did stare in wonderment at the smartly dressed gentleman who drew water from the well so clumsily and laughed and talked with Beck.

"Come again, will you?" she said, eagerly, as he was departing.

"May I? I shall be delighted." With a graceful tip of the hat he was gone.

Beck walked in the house like one treading on air.

"Who is he?" asked Rushy. "Where'd you find him?" questioned her mother. But Beck was wonderfully secretive.

"He's a city feller, visiting at Thornton's, and he was down in the orchard eating cherries."

"Think you've made a mash, do you?" sneered Rushy.

"Will he come again?" was the question that rolled over and over in Beck's mind, while the churn went "swish, swash." "Think of Jim Tompson by the side of him," and she stopped the rotary motion and laughed shrilly.

The next morning Beck was at the cherry tree, eagerly watching for the "city feller," but he did not appear. Three days she waited for him, and on the fourth he came. Beck's face shone with unfeigned happiness.

"I was so fraid you wouldn't come."

"I couldn't stay away," he said, smilingly, as he sat on the grass beside her.

They met frequently after this.

The mother said, "He's only making a fool of you, Beck." Rushy sneered unpleasant things. Jim Tompson sulked in the background. But the father summed it all up in these words:

"If that girl's got her head sot, you might as well give up one time as nuther. You can't do nuthin' with her."

The Summer passed all too quickly for Beck, and in August the "city feller" came to see her no more. He went his way, back to his city home, without a word of good-by for Beck. There would be a scene if he told her that he was going, and he hated scenes. There were no qualms of conscience for him. He had simply amused himself. How the boys would laugh at his recital of her odd speeches and grotesque ideas! He would have a good story to tell, just as he would recount how large a trout he had caught and how much game he had bagged.

Beck did not die of a broken heart. She just lived on, in her quiet way. Few noticed any change in her. Jim Tompson was one of the few who became aware that there was a change.

One Sunday evening, arrayed in a striking attire, he sallied forth to call on Beck. He had on a suit of clothes of the same style that he had seen the "city feller" wear, a necktie of the exact shade, and his feet were squeezed in a pair of shoes several sizes too small for him, with patent leather tips.

Beck was sitting on the steps, thinking thoughts that caused a queer look to come into her eyes. Jim appeared before her, trying his best not to show that he was suffering intense pain in his toes. He took his hat from his head and held it gingerly in both hands.

"Good evening," he said.

Beck looked up. A laugh, long and loud, burst from her lips.

"Good heavens, Jim! You look like a fool."

Jim blushed deeply, but ventured to sit down beside her. She shoved as far away from him as possible.

"Now, Beck, what's the matter?" he said, pleadingly. "You used to like me 'fore that confounded chap came round."

"Well, I don't like you now, and I wish you'd go way."

Poor Jim! He could only hobble home and hurl curses at his fate.

In the Fall Beck went to the city with her father to sell the butter. They rode in the lumber wagon, perched up on the spring seat. Beck was in high spirits. She felt like a queen riding in a triumphal procession. They left home long before daylight, but it was nearly noon when the city was reached. Beck's eyes were kept busy gazing on the sights, and her neck tired from turning her head this way and that, lest she should lose a view of something. When the butter was sold her father took her aside and said:

IT WAS TOMPSON'S OLD SORREL NAG.

"I've got two cents a pound more than I 'spected to for that butter. You just go over to that store there and buy you and Rushy each a new calico dress. Then come back to this corner and wait for me. I've got some running around to do."

Beck clasped the money in her hand and watched her father till he disappeared down the street. Then she took a slip of paper and a stub of a pencil from her pocket and wrote these words:

"I ain't goin' home with you. I'm goin' to live in the city. You can all come to see me some time. I'll 'rite where I'll be."

She took her shawl pin and fastened the note on the blankets in a conspicuous place. She turned and walked rapidly on, past the store indicated, up one street and down another, keeping a strict watch of the people she met all the time. A form in the distance would make her heart throb, but as it came nearer she would look disappointed. A lady noticing her country garb and dazed manners beckoned to her.

"Are you looking for work?" she asked, kindly.

"Yes," Beck answered, for she had nothing better to say.

"I am in search of a second girl. Will you go home with me?"

Beck wondered what a "second girl" could be, but she went with the lady. The electric lights were beginning to flicker in the streets, her knees were shaky from so much walking, and she was glad to have a place of refuge offered her. She was not long left in ignorance concerning the duties devolving on a second girl. Upon arriving at her home, the lady marshaled her into the kitchen and gave her into the charge of the black genius presiding there. The negress' orders were many and merciless. She showed unconcealed contempt for the "Greenie," as she dubbed Beck.

Not many hours of her city life had passed before Beck was homesick. Late that night she dragged herself up the two flights of stairs to the bare room in the attic assigned to her, and wondered if she could live till morning. She thought of her father, mother, Rushy, and everything connected with her home. She felt that she would give all she possessed if she might be at home again. She was too miserable to cry, but lay there in a wretched, sleepless state till the morning came. Then the negress stopped snoring just long enough to tell her to get up and build the fire.

Beck rose with alacrity and dressed herself. She went down the stairs and straight to the street door, turned the lock, and passed outside. She walked swiftly away from the house, not daring to look back, lest she should see the form of the negress behind her, ready to clutch her and drag her back. When the house was lost to her view she stood still. Which way should she go? The thought uppermost in her mind was to reach home as soon as possible.

A good policeman gave her the necessary directions. Two days she tramped, resting often by the roadside, eating her meals at farmhouses, and lodging with a kind hearted old lady. On the afternoon of the second day her surroundings began to wear a familiar look. The agony in her heart grew less, for she was nearing home.

It seemed as though she had been away for a month. She walked eagerly on. There was the sound of wheels behind her. She glanced back. It was Tompson's old, sorrel nag, before their shackelty buggy, and Jim himself was on the seat. As he came opposite Beck he drew up the reins.

"Whoa, Fan. Be that you, Beck? Why, I heerd you was goin' to stay in the city. Have a ride? Here, gimme your hand and hop up."

Beck was trembling, and there were tears in her eyes. It seemed so good to see Jim once more, and hear him talk as though nothing had happened.

"Jim," said Beck, as she sat beside him, and the old nag was jogging on, "Jim, I'm sorry I said what I did that Sunday night, and I do like you after all."

A smile of happiness shone in Jim's eyes and spread over all his face. He threw the lines over the dashboard and flung two strong arms around Beck and kissed her cheek, not once, but many times.

THE APIARY.

Hummings.

BY J. W. TEFT.

One ungrateful beekeeper does an injury to all honey producers who stand in need of aid.

The best way to make a name as a beekeeper is to have an aim in producing bees and ripe honey.

It is not the quantity of the nectar or juice or sap a beekeeper throws out of the combs, but the quality, which always pays.

Consult with the beekeeper who is wise and sound of judgement and seek to be instructed by him rather than by following your own ideas and inventions.

Good will, like a good name, is secured by many actions, and lost by selling nectar from flowers gathered by honey bees and taken from the combs by the extractor before it is ripened by the bees.

Such juice as is sometimes sold for honey is fit only for manufacturing into mucilage or shoe blacking. Merchants receiving such stuff should return it from whence it comes at the owner's expense.

Every beekeeper takes care that his neighbor shall not cheat him, but the day comes when he begins to care about cheating his neighbor. It would be excellent if the producers of vegetable fluid would reason this way.

Unripe honey is a curse to the trade. He who produces and sells the vegetable juice as honey hurts himself more, and daily bears about with him in his breast a silent court of justice—himself the judge and jury and the prisoner at the bar.

A writer who has kept a very close watch says that he found that when bees gained from one to three pounds, about one-quarter of the gain is stored as surplus; when the gain is from three to eight pounds, about one-half is stored as surplus.

Honey is a sweet vegetable juice collected by honey bees from flowers and plants and deposited in the cells of the combs in the hive, and there ripened by the honey bees. He who slings or extracts this juice from the combs as fast as the bees gather it is a very unwise beekeeper.

Eastern beekeepers produce well ripened, extracted honey. They say improvement is the order of the day. Liquid honey gathered and ripened by honey bees is distinctly for table use. This is genuine natural honey. It is also a luscious, delicious morsel, nourishing, strengthing, easily digested, and is naturally adapted to invalids as well as persons in health. It is an invigorating food.

I notice quotations in the market reports of California extracted. I think it a rank and unfit stuff for the table use. Why do dealers or commission merchants quote prices on such stuff? It is not honey and never will be honey unless ripened in the hive by the bees. New York and other Eastern States produce ripe honey, but the dealers and merchants seemingly do not understand the difference.

Query 892 in the *American Bee Journal* is answered by a number of apiarists, and all but one of them were really a waste of printer's ink in publishing them. Mrs. Jennie Atchley's answer, sound and pointed, covered the whole ground. Those beekeepers who used the antequated bee improvements, such as honey boards, drone traps, metal covered frames, self hives, queen excluders, shallow brood nests, single-walled hives, cellar wintering of bees, clipping queen's wings, etc., get left every time. To look back to these antiquated bee fixings is one thing; to go back to them is another. If I look back to them it should be as those who are running a a race—only to press forward the faster and to leave the beaten tracks further behind.

A CHAT ON BEES.

Institute Work Begun in Missouri—A Good Way of Wintering Bees.

WE STARTED out the first of last month with the farmers' institute to lecture on bee culture. Many suppose that honey and wax are the only products of the bees; but such is not the case, as without the aid of the bees there would be a very material shortage in the horticultural department. The bees visit the fruit trees when in bloom for nectar and pollen, and by getting the pollen dust on their legs they carry some of it to other blooms. This causes fertilization to take place, as in many blooms which may even contain both sexes, the one comes out before the other and thus when the stamen does come out it is too late to be fertilized from its own bloom, and so must get pollen from some other bloom, and the bees do this work. There are other insects that can do this work besides the bees, but when the fruit blooms are out in early Spring it has been found by observation that there would be 20 bees to 1 insect of any other kind in the bloom.

Any one can make a test for themselves and see what the bees do by taking a limb of a fruit tree and covering it with wire cloth or anything that will protect it from the bees and insects just before it comes in bloom, and afterward note the results, and they will find there will be little or no fruit that will form on the limb protected. Again, if when the fruit is in bloom it is too cool or wet for the bees to fly during the blooming period, there will be no fruit.

One party having bees noticed that his orchard bore fruit along where the hives set, but nowhere else in his orchard, as the bees could only get to the trees close to the hives where the trees were in bloom on account of being too cool. W. W. Rawson & Co., of Boston, Mass., who have large green houses and raise cucumbers for the Winter market, are compelled to keep bees inside their green houses in order to have them cause fertilization to take place on the vines. They have no other use for the bees only to help in the matter of raising cucumbers. Bassford Bros., of Vaca Valley, Cal., after trying in vain to produce a crop of cherries from their large orchard, procured some bees, when their trees bore fruit profusely, while some of their neighbors five miles away without bees had no better success than they did before securing the bees.

Now, in regard to farmers' institute work, there are many persons that say the effort and money spent in conducting them is wasted. I was talking with a citizen of our town just the other day, and his opinion was that institute work was no good, as he supposed that the parties engaged in them were book learned, and not of practical experience. I cited him to my own case as being a practical apiarist, and I knew what I was talking about by experience. He then went on to say if farmers would do so and so they might greatly increase their crops.

I said to him that that was just the kind of persons that the Board of Agriculture secured to talk to the farmers—men of practical experience, and who could tell from their own experience how best to do. Institute work in the West is not appreciated as it is in the East, but as the people begin to come more and more every year to the institutes, some of them are beginning to learn the advantages to be gained by attending the meetings.

While we have one of the grandest agricultural States in the Union, still agriculture is not near what it might be, because of poor culture and slip-shod ways of cultivation. Men will learn after a while that it is worse than nonsense for one person to work over a 40-acre field to get what may be produced on 20 acres, and that of much better quality. On an average, by more and better fertilization and cultivation the work may be done.

I was forcibly impressed some years ago by a remark I heard one make in a farmers' institute in regard to manuring a plot of ground that was close to his residence, although it was then very rich in fertilizers, he still hauled all the manure he could procure in that particular plot of ground rather than to haul it to another plot that was situated some distance off that needed fertilizing very much. His reason was that he could haul two loads close by while he could haul one to the plot farther off, and he also could haul two loads of the product of the ground back again while hauling one from the further plot; and then again by increasing the fertilization of one piece to a high state he could produce more than twice as much on the plot than if he divided up the fertilizer on more ground.

There has been a great deal written on the Winter problem, but perhaps there is room for more light on the subject. We have lectured before our farmer's institutes in this State this Winter, and have frequently been asked in regard to cellars for bees, and always advised outdoor Wintering on the Summer stands for the most of beekeepers. While we are fully satisfied if all the conditions are right and kept right, the cellar for the bees to Winter in is the best and a saving of stores. Still there is where the trouble comes in with the inexperienced; the careless are negligent. I am fully satisfied that bees put into a cellar with such stores as many of them had last Fall will in very many cases be found dead this Spring, as bees are spotting the hives, snow and everything all around when they can come out after being confined 12 or 15 days, their food giving them the diarrhea. They are very cleanly in their habits. They will not evacuate inside the hive if they can avoid it, only doing so when on the wing; consequently when confined in a cellar in such a condition they are certain to perish or die before Spring.

I am confident that stores have more to do with Wintering bees successfully than protection. I have repeatedly seen bees very poorly protected come through the Winter all right; have seen hives very open and a great deal too large, and some with open cracks that would admit wind and cold air, and once transferred a colony out of a tree in the woods that leaned to the northwest and had a full open top where the bees went in, and they Wintered all right in that place, as they had been seen to go in there the Summer before, so that we are fully satisfied that bees can Winter even in an exposed place in many instances if their feed is good.

However, we do not believe that it is true economy for the beekeeper to Winter his bees without some protection, as it takes from one-third to double the stores to Winter the bees where not well protected than it would if they had been. Colonies have been Wintered on from five or six pounds to 10 or 12 pounds, according to size of colony and protection given; whereas colonies not well protected will consume from 15 to 25 or 30 pounds. We will suppose that by good protection 10 pounds of honey could be saved in a colony, which at 10 cents per pound, the price of good extracted honey, would be $1, would certainly pay for good protection, especially where one had from 10 to 20 or more colonies; and after the protection is once secured it will last as long as the hive will, which makes it a good investment. There is a hive in use called the Telescope hive, which is a double-walled hive, and can be used for either Winter or Summer, and only costs a little more than a plain one. An outside Winter case can be used, and is good, but the cases have to be taken care of through the Summer season and are of no use until Winter again. In both these cases a chaff cushion can be used over the bees, and the bees wrapped up snug and tight for Wintering. A regular chaff hive is very good, but is too bunglesome for Summer use and costs more than either these first two kinds mentioned.

It will pay to take care of our pets, and a little extra cost in a hive that gives good Winter protection is a good investment, as the bees not only Winter better in them, but will build up much faster in early Spring when well protected, and be in shape for the honey harvest when it comes. One good colony is worth more than five or six weak ones to gather honey.—J. M. ROUSE, Mexico, Mo.

A WATCH, A CHAIN, A PAPER, $1.65.

The Best Premium Offer Ever Made to the American Public.

NO TOY, NO HUMBUG, NO CATCH.

Only an Honest Watch and a Great Newspaper for Every Farmer for less Money than he Can Secure them Anywhere Else.

THE FACE.

In order to put THE AMERICAN FARMER at the top of the list in number of subscribers, we have secured sole control of the output of an American watch factory, which we will dispose of within the next thirty days at less than cost.

This statement does not seem reasonable upon the face of it, but our readers know that the extension of a subscription list to any newspaper involves an enormous expense in advertising, and for other purposes. A new subscriber to any newspaper costs more than the publisher receives, owing to the expense incurred in procuring him. It is only subscribers who continue their patronage year after year who are profitable from a pecuniary standpoint.

We intend, at any cost, to put the subscription list of THE AMERICAN FARMER at over three hundred thousand and take our place at the head of the list.

We therefore make the above offer of an honest watch, a chain, and THE AMERICAN FARMER for one year for the insignificant sum of only one dollar and sixty-five cents.

The offer includes the delivery of all, prepaid, to any address in the United States.

DESCRIPTION OF THE WATCH:

This watch is a timepiece guaranteed to run with accuracy. It need only be wound once every 24 hours. No key has to be carried, but it winds and sets by a patent attachment. The face, therefore, need not be opened to set it. It is suitable to carry in the pocket or to hang upon the wall in bedroom or parlor. To save space, the cut is slightly reduced in size, the face of the watch being one and seven-eighths of an inch in diameter and fifteen-sixteenth of an inch thick. It is no heavier than an ordinary silver watch, and but a trifle thicker. It has a strong, quick beat, and runs in any position, either at a standstill or in motion, and is not affected by heat or cold. It is open-faced, with a heavy glass crystal. The case is polished and lacquered to resemble gold. This material is frequently advertised as oreide or firegilt. The chain is not shown in the cut. It sells at retail in the country from 15 to 25 cents. A small charm also goes with the chain.

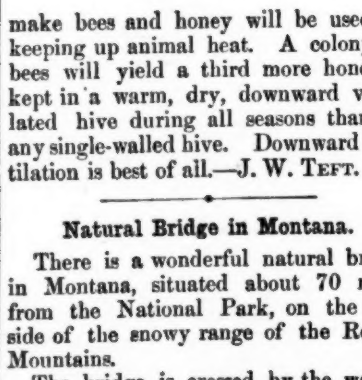
Remember that THE AMERICAN FARMER comes twice a month at the regular price, when taken alone, is fifty cents a year. We send, postpaid, the watch, the chain, and the paper for an entire year for only one dollar and sixty-five cents.

In order to demonstrate our entire confidence in our proposition, we guarantee the delivery of the watch in good running order.

The watch and chain will be sent, postage prepaid, to anyone who will send in a club of **six** yearly subscribers at **50 cents** each, and only 10 cents additional money to pay cost of postage and wrapping.

Warm Beehives.

EDITOR AMERICAN FARMER: We want good double-walled hives to keep the bees warm, because food is to the animal bee system what fuel is to the fire. If our bees are exposed to the cold storms of Winter, the food that goes to



make bees and honey will be used in keeping up animal heat. A colony of bees will yield a third more honey if kept in a warm, dry, downward ventilated hive during all seasons than in any single-walled hive. Downward ventilation is best of all.—J. W. TEFT.

Natural Bridge in Montana.

There is a wonderful natural bridge in Montana, situated about 70 miles from the National Park, on the east side of the snowy range of the Rocky Mountains.

The bridge is crossed by the wagon road from Big Timber, on the Northern Pacific Road, to the new mining camp of Boulder. It consists of a ledge of rocks about 90 feet in hight, extending across a canyon 300 feet in width. The width of the bridge at its narrowest point is 200 feet. A channel through this mammoth ledge allows the waters of the Boulder River to pass, and gives a perpendicular fall of 85 feet to the bottom of the canyon. The stream bursts from out the side of Rocky Pass with a tremendous roar, which can be heard for a distance of half a mile. It is estimated that 200,000 miners' inches of water pass through the viaduct every minute. In June and July, when the melting of the snow in the mountains increases the volume of the water in the Boulder, the immense outlet through the rock fails to let the water pass and an overflow is the result, sometimes making the travel over the bridge hazardous.

There has been formed a company for the purpose of utilizing this great fall of water for generating electricity for the operating of an electric road between Big Timber and the Boulder camp, a distance of 40 miles, and for furnishing light to Big Timber and the various mines in the Boulder district.

A Pennsylvania miner found a frog in a cavity in a lump of coal broken by him. He placed the frog in an air-tight pan. At first it showed no signs of life, but after being in the pan about six hours it began to move about. After 10 hours' exposure to the light it was as lively as any modern specimen. In size the frog is much larger than the ordinary pond frog, and the color of the skin is brilliant. It weighs about three-quarters of a pound.

We propose to give away 100,000 watches as fast as our friends want them.

Nitrate of Soda on Strawberries.

EDITOR AMERICAN FARMER: I would like to know something about the use of nitrate of soda on strawberries. How much is used to the acre, and what are the effects?—S. A. PARKER, San Quintin, Cal.

Nitrate of soda is usually applied as a top-dressing, at the rate of 200 pounds per acre. In the Spring of 1891 the New Jersey Experiment Station tried a careful comparison of two plats, each of one-eigth of an acre. One plat was left untreated, and the other given a top-dressing of nitrate of soda, at the rate of 200 pounds to the acre. A very decided difference was noted in the leaves of the two plats—those in the untreated plat showing a deeper color, larger leaves, and a much stronger bloom. The yield of berries on the untreated plat was 162 quarts, to 213 quarts on that dressed with nitrate of soda. The gain in yield was therefore 51 quarts, or at the rate of 408 quarts per acre, or 31 per cent. This was mainly due to the increased size of the berries. The number of berries was very slightly increased. The berries were sold in the New Brunswick market at an average price of 10¾ cents per quart. There was therefore a gain of $5.54 per plat, or $44.32 per acre. The nitrate of soda cost $45 a ton, which made the cost of the amount used $4.50 an acre, making almost exactly a return of 10 cents for every cent invested in the nitrate.—EDITOR AMERICAN FARMER.

The Mexican primrose is a continuous bloomer. It should be included in every collection of Winter blooming plants, and is equally desirable for the lawn or flower garden during the Summer.

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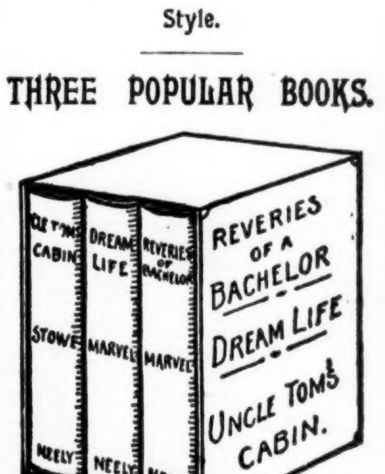
Made Especially for Our Use, and Designed to Suit the Most Fastidious Taste, Both in Literary Merit and Artistic Style.

THREE POPULAR BOOKS.



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By Harriet Beecher Stowe. Handsomely bound in red and white cloth and vellum.

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A Book of the Heart. By Ik. Marvel. Same binding as above. "The author, in his quaint sayings and frank musings, shows how conversant he is with human nature and the working of the human heart."

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By Ik. Marvel. Same binding as above. Of these last two books, a noted critic says: "Three generations of Americans have read them, and their hearts have grown tender with the reading. The sweetness, the gentleness, the humanity, the little touch of quaintness withal, are what has given to these books their immortality."

These three books, put in a neat box, making a most charming and attractive set, are just the thing for a souvenir gift, or for personal use.

The three books in the box, postpaid, and AMERICAN FARMER for one year . $1 20

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THE AMERICAN FARMER.

"O fortunatos nimium sua si bona norint agricolas."—VIRG.

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TO ALL TO WHOM THIS PAPER SHALL COME.

Greeting: This paper is sent you that you may have an opportunity to see it and examine it, with a view to subscribing. We ask you to compare its contents, objects, and price with those of other papers, and see if you do not come to the conclusion that you ought to have it; that you cannot afford to do without it. We can assure you that if you send in your name for one year that you will find it one of the most profitable investments that you can make. We hope to make and keep it so interesting that you will think that every number more than repays you for the subscription price for a year. Please call your neighbor's attention to the paper.

OUR CLUBBING LIST.

The American Farmer Will be Sent in Connection With Any Other Paper or Magazine.

We will send THE AMERICAN FARMER and any other paper or magazine in the country at a reduced rate for the two. The following is a partial list of the periodicals that we club with:

Name of Periodical.	*Regular Price.*	*With the American Farmer.*
Pansy	$1 00	$1 25
Our Little Men and Women	1 00	1 25
Worthington's Magazine	2 50	2 50
Babyland	50	90
The National Tribune	1 00	1 25

RAISE CLUBS.

Every farmer who believes in defending farmers' rights against this vicious raid of the politicians should not only subscribe for THE AMERICAN FARMER himself, but make every effort to induce his neighbors to do likewise. THE AMERICAN FARMER is the only great agricultural paper in the country which is making a bitter fight against this outrage on the farmers. It is the only truly National farmers' paper, which circulates in all parts of the country, and represents every form of farming interests in all sections. It is the only one published in the National Capital, where the fight can be made most effectively. The more subscribers it has the stronger it can be made for the struggle, and the more it can do to defeat the onslaught. In subscribing for it a farmer is helping a champion fight his own battles.

If the paper can have its circulation doubled this Winter it will do more than any other one influence to defeat the raid made on the farmers.

We ask every man who feels that the farmers should not be crucified by the politicians to manifest his protest by sending in his own name and those of his neighbors. To facilitate this we will send five copies of the paper one year for $2. Any farmer can get four of his neighbors to join in paying 40 cents a year for so good a paper, and one which is doing so much for their interests.

We ask all our friends to do this at once.

THE expectations are very high for a successful series of Farmers' Institutes in Indiana this Winter. The interest in them has been steadily growing, largely owing to the excellent management of Prof. W. E. Latta, of Purdue University, the State Superintendent of the Institutes.

EVEN the sumac gatherers of the South did not escape. The duty on ground sumac is to be reduced from four-tenths of a cent per pound to 10 per cent. *ad valorem*, which, with certain undervaluation, makes it practically free.

THE brewers are a mighty political power in this country. Hence the farmers are to be sacrificed to them in the reduction of duty on barley.

THE NEW TARIFF BILL.

The Ways and Means Committee has done its work, and, as we have constantly warned the readers of THE AMERICAN FARMER, that work was mainly a raid on the farmers. The blow which has been given the public is even worse than we feared. While there is an elaborate pretense of cutting down all along the line, this is largely pretense, and farming products are slashed at everywhere, while great numbers of other products are left untouched, and nowhere, except in ores, coal, lumber, salt and some few minor articles, is the reduction so sweeping as upon agricultural products.

Nothing shows this more clearly than the free list. The articles which have been placed on this yielded in the fiscal year of 1892, $13,500,000 of revenue. Of these the purely agricultural products paid the following amounts of duty:

Seeds	$51,225
Straw	5,646
Flax and hemp	295,484
Wool	7,802,085
Apples	2,290
Meats	42,000
Bristles	147,875
Cabbages	946
Eggs	269,210
Cider	109
Hides and hair	20,678
Feathers and downs	60,958
Sundries	63,331
Total	$8,761,837

Thus we see that more than two-thirds of the entire burden of these reductions was made upon the farmers. They have to stand a reduction of $8,761,831, where the ore and coal miners, the coke burners, the salt boilers, the lumbermen, the borax makers, the manufacturers of agricultural machinery, etc., altogether, only stand a total reduction of $4,738,-169.

The same discrimination against agricultural products appears in those which are retained. Schedules F and G contain most of these, and are as follows:

SCHEDULE F.

Tobacco and Manufactures of.

	Proposed Rate.	*Present Rate.*
On all leaf tobacco, on such part thereof as is commercially known as wrapper tobacco, and suitable for cigar wrappers, if unstemmed	$1 00	$2 00
If stemmed	1 25	2 75
All other leaf tobacco, if unstemmed	35	35
If stemmed	50	50
Tobacco, manufactured or unmanufactured, of all descriptions not specially enumerated	40	40
Snuff of all descriptions	40	50
Cigars, cheroots, and cigarets of all kinds, including wrappers	3 00 & 25 p c	4 50 & 25 p c

SCHEDULE G.

Agricultural Products and Provisions.

	Proposed Rate.	Present Rate.
All live animals not specially provided for	20 p c	20 p c
Buckwheat, corn or maize, cornmeal, oats, oatmeal, rye, rye flour, wheat, and wheat flour, but each of the above products shall be admitted free of duty from any country which imposes no import duty on the like product when exported from the United States	20 p c	1 to 25
Barley, barley malt, and barley, pearled, patent or hulled	20 p c	2 to 45
Macaroni, vermicelli, and all similar preparations	25 p c	2
Rice, cleaned	1½	2
Uncleaned rice or rice free of the outer hull and still having the inner cuticle on	1	1¼
Rice, flour, and rice, meal, and rice broken, which will pass through a sieve known commercially as No. 12 wire sieve	¼	¼
Paddy or rice having the outer hull on	¾	¾
Butter and substitutes therefor	4	6
Cheese	25 p c	6
Milk, preserved or condensed	20 p c	3
Beans	20 p c	40
Beans, peas, mushrooms, and other vegetables prepared or preserved in tins, jars, bottles or otherwise, including pickles and sauces of all kinds	30 p c	40 to 45 p c
Hay	2 00	4 00
Honey	10	20
Hops	8	15
Onions	20	40
Peas, dried	20	20
Split peas	50	50
Peas in cartons, papers or other small packages	1	1
Potatoes	10	25
Castor beans or seeds	25	50
Flaxseed or linseed, poppyseed and other oil seeds	20	30
[No drawback shall be allowed on oil cake made from imported seed.]		
Vegetables in their natural state, not specially provided for	10 p c	25 p c
Anchovies, sardines, and other fish packed in oil	30 p c	2½ to 10 to 40 p c
Fish, smoked, dried, salted, pickled or otherwise prepared	¾	¾
Herrings, pickled, frozen, or salted, and fish frozen or packed in ice for preservation	½	¾
Fish in cans or packages, except anchovies and sardines, and fish packed in any other manner not specially enumeratd,	25 p c	30 p c
Grapes, plums and prunes,	20 p c	2 & 60
Figs	20 p c	2½
Oranges, lemons and limes in packages	10	13 to 50
In bulk	1 50	1 50
In addition, upon boxes or barrels containing such oranges, lemons or limes	30 p c	30 p c
Raisins and other dried grapes	1½	2½
Comfits, sweetmeats and fruits preserved in sugar sirup, molasses or spirits, and jellies of all kinds	30 p c	35 p c
Fruits preserved in their own juices	20 p c	30 p c
Orange peel or lemon peel preserved or candied	30 p c	2
Almonds not shelled	3	5
Clear almonds, shelled	5	7½
Filberts and walnuts of all kinds, not shelled	2	3
Shelled	4	6
Peanuts or ground beans, unshelled	1	1
Shelled	1½	1½
Nuts of all kinds, shelled or unshelled, not specially provided for	1	1½
Extract of meat	20 p c	15 to 35
Poultry, live	2	3
Dressed	3	5
Chicory root, burnt or roasted	2	2
Chocolate, other than chocolate confectionery	2	2
Cocoa, prepared	2	2
Cocoa butter or cocoa butterine	3½	3½
Dandelion root and acorns, prepared, and other articles used as coffee or as substitutes for coffee, not specially provided for this act	1½	1½
Starch	1	2
Dextrine, burned starch, gum substitute or British gum	1	1½
Mustard	10	10
Spices, ground or powdered	3	4
Cayenne pepper	2½	2½
Unground sage	1	3
Vinegar	7½	7½

The motto of the Ways and Means Committee seems to have been: "Wherever you see anything that the farmers are making money on, hit it, and hit it hard." Nothing was allowed to escape. The trucker's onions, beans, peas, cabbages, and potatoes, the poulterer's eggs, the tobacco grower's patches, the citrus people's lemons and oranges, the orchardmen's apples, the grapes and raisins, the dairymen's butter and cheese, the rice fields, the beekeeper's beeswax, the general farmer's hay, barley, hemp, and flax, the sugar grower's cane, beets, and sorghum, the shepherd's flocks, all were singled out to be struck down.

It is singular that with nearly 4,000 articles on the tariff list, substantially everything that the farmer raises was raided, and while hundreds of other articles were left untouched.

The press of the country has been lecturing the farmers for years on the necessity of diversifying their products. We have created a great Agricultural Department in Washington, and established experiment stations at much cost all over the country, mainly with a view to help educate them in the way of such diversification, and the framing of the laws for the last few years has been steadily looking toward encouraging this. Under this stimulus the progress made has been very gratifying. A great variety of minor products have been developed to aid the farmers to a profit in their struggle to make a living by producing the great staples of breadstuffs and meat in competition with the pauper labor of Russia and Hindostan.

The Committee on Ways and Means has deliberately and wickedly attempted to strike all this down. So far as lies in its power it has tried to destroy all these carefully nurtured industries, undo the good work of years, and confine our farmers to a losing competition in producing the great staples with the swarming paupers of Russia and Asia. It should not be allowed to consummate its plot. It will not, if the farmers rouse themselves in defense of their rights.

FARMERS AND WORKINGMEN.

The farmers of this country sell the workingmen of the cities and towns the great staples of life—bread and meat—much cheaper than they can buy the same in Europe. They also sell them fruit, melons, etc., which would be entirely beyond their means in Europe, at very low prices. To the English, Belgian or German workingman a watermelon, canteloupe, peach, pear, or basket of grapes is as much of a luxury as a bottle of champagne. In this country these are constantly within easy reach of the poorest paid workingman. The farmer sells him all these, with his bread and meat, at very low prices. It is the sheerest demogogy, therefore, to rob the farmer of such protection as he now enjoys, under the plea of giving the workingman cheaper food. The workingman lives much better here, at the expense of the farmer, than he can in any other country in the world. He should be willing to allow the farmer some profit on his business. He is willing. It is only the selfish politicians who want to rob the farmer, in hopes of getting the applause and the votes of the workingman.

SHEEP IN SOUTH CAROLINA.

There is a gratifying prospect that the people of South Carolina are at last waking up to the importance of sheep for their country. The Charleston *News and Courier*, the leading paper in the State, has come out with a leading editorial pointing out the changes that are inevitable in Southern agriculture, and urging the farmers, the Agricultural College, and the Legislature to turn their earnest attention to both mutton and wool raising. The editorial concludes:

> Read the story that is published to-day of Gen. Bratton's success in sheep raising as told by Mr. G. H. McMaster, of Fairfield County, and then say whether it is not well worth while to encourage and develop so profitable an industry in the State, by all means. Starting with 50 poor sheep in 1866, within six years Gen. Bratton had increased his flock 600 per cent., and besides accomplishing this result had sold $1,700 worth of wool and mutton and had raised his lands from the lowest to the highest degree of fertility; and all at the cost of "a little cotton seed fed for a few weeks in the Winter."
>
> The story carries its own lesson with it. What has been done by Gen. Bratton can be done by any and every farmer in South Carolina, and by every farmer who will come to South Carolina and make his home here. There is but one drawback on the development of this great and paying industry—the presence of thousands of worthless dogs ready to destroy the work of the farmer when it has been completed. Will not Gov. Tillman and the Legislature pass a dog law this year?

FIGHT IT.

There is but one thing for the farmers to do with the iniquitous tariff, and that is fight it—fight it to the bitter end. THE AMERICAN FARMER will lead in the fight. Let every farming interest which is assailed by the bill get up petitions and remonstrances, to be as numerously signed as possible, and send them to us. We will see that they are properly presented.

ANYONE sending us four yearly subscribers at 50 cents each will receive an additional copy free.

DEATH OF EX-SECRETARY RUSK.

Every farmer feels sincere grief at the death of that grand old farmer, Hon. Jeremiah M. Rusk. There was no truer farmer, no truer all-around man in the Nation. He was one of the products of our society and institutions that makes us proud of them. He was a great, strong-armed, strong-brained, pure-hearted American man. His integrity of character and native ability brought upon him the discharge of many varied duties of citizenship, and he never failed to win the highest credit in whatever position he was placed. But whatever he might be called upon to do he was a farmer from first to last. Whether leading a regiment with distinguished gallantry in many battles, whether governing with admirable sagacity a great State, or whether occupying the proud place of Constitutional advisor to the President of the United States, and successfully administering a great Department of the Government, he was still a farmer, proud of his calling, and devoted to it and to the interests of his fellow-husbandmen. The farmers of the United States never had a better representative in public life than Jeremiah M. Rusk.

He was born on a farm in Morgan County, O., June 17, 1830, and emigrated to Wisconsin when he was 23 years old, taking up a farm in Bad Ax County, which he owned to the day of his death. In 1862 he entered the army as Major of the 25th Wis., and soon became Colonel of the regiment, and commanded it on the Vicksburg and Atlanta campaigns and the march to the sea. Upon his return home he was elected to various State offices, then sent to Congress for six years, and then elected three times Governor of Wisconsin. He was a candidate for the Republican nomination for the Presidency in 1888, and President Harrison invited him to enter his Cabinet as Secretary of Agriculture. He filled this place with brilliant success, and greatly enlarged the sphere of practical usefulness of that important branch of the Government.

THE WHEAT MARKET.

It is beyond question that wheat should bring $1 a bushel. We say this not on a sentimental, but strictly business basis. There is no proper reason why, with the wheat crop of the world fully 100,000,000 bushels less than it was two years ago, wheat should be worth 50 cents a bushel less in the London market than it was then. The only explanation is that the Russian and Hindus, who are suffering from exceedingly hard times, are rushing their wheat into market at any price they can get for it, and as long as their stocks hold out Americans will have to take the same prices for whatever grain they sell abroad, and these prices will govern those received at home.

Undoubtedly, if American farmers would agree among themselves to sell no wheat for less than $1, the price would immediately rise to that figure. We need not export a single bushel, as we have scarcely as much in the country as our people will need before the next crop comes in.

The stocks in Hindustan and Russia must soon become exhausted. Though our wheat growers have much to fear from those sources in the future, they have already done about all the damage they can for this season. They have had small crops, and have about sold out. We think that nothing is more certain than that the price of wheat will steadily rise from this time forward until next Spring.

ONE of the biggest blunders made in the new tariff bill is the general substitution of *ad valorem* for specific duties. This will work badly in all directions. The first and worst feature is that it places a premium on perjury and swindling. The judgment of all the tax experts of the world is against it. It demoralizes alike the revenue officials, the merchants, and the foreign and American producers. Foreigners will systematically undervalue their goods, swear falsely to such undervaluation, connive with our importers to cover it up, and bribe Consuls and Customhouse officials to be their accomplices. It will immensely encourage the deluging of the country with shoddy, worthless goods of all kinds. Under a specific tax only goods of fair value are imported, and the tendency is to constantly raise the quality of the specific grades. Under an *ad valorem* system, the cheaper and trashier the goods the better, and this must work general loss and injury.

Ask all your neighbors to subscribe for THE AMERICAN FARMER.

THE Canadian farmers rejoice, and with reason, over the new tariff bill. It will put a good many million dollars in their pockets, taken from those of our own farmers. By the way, will the free traders kindly state how much of a market will be opened up in Canada for our agricultural products by this generous gift to Canadian farmers? The Montreal *Herald* is overflowing with delight. It says:

> Barley will hereafter be taxed only 12½ cents per bushel, in place of the almost prohibitive rate of 40 cents imposed by McKinley, and this rate will permit a revival of the Canadian barley trade. Mr. Wilson's statement that "fresh vegetables, fruit, eggs and like food products are untaxed" will be the happiest message the Canadian farmer has had for many years, for they open before him a market of almost illimitable possibilities.

THE most hopeful thing for months for cotton planters was the sale last week in New York of about $1,000,000 worth of cotton goods. These brought prices that, in view of all the conditions, were very good. The sale showed that the stocks in the stores of the country and in the mills had been pretty well cleaned up, and that people wanted more. This points to a resumption of work by the mills everywhere, and a steady increase in the demand for cotton, with an improvement in prices.

IF the farmers will show that they are in earnest in defense of their rights they can defeat the raid on them. Let us have a flood of petitions at once, which will show that our people do not intend to be crucified.

CHAIRMAN Wilson says that "in no instance can the *ad valorem* duties on manufactured wools exceed 50 per cent." Why did he not act with equal fairness to wool and leave a 50 per cent. *ad valorem* duty on it?

LET every farmer send in his protest against being crucified by the politicians in the shape of a club for THE AMERICAN FARMER.

SEND all your petitions and remonstrances to THE AMERICAN FARMER. We will see that they get into the right hands.

IF YOU want to help in the fight for farmers rights, send in your subscription to THE AMERICAN FARMER.

RAISE CLUBS.

We want every one to try to raise clubs for THE AMERICAN FARMER. It is a splendid journal, and will find favor in the eyes of all who see it. It ought to be very easy work to get subscribers. We will make good inducements for sons and daughters of farmers to get up clubs. Write for terms to club-raisers, and premium lists.

Best Method of Keeping Irish Potatoes.

Will you please give me the best method to keep Irish potatoes from rotting after they are dug, if you have such information at your command. I want to put them up so as to keep for Winter use. This is why I want the best method to do it.—P. A. B., Durham, N. C.

Early potatoes grown in this climate cannot well be kept later than Christmas. You should raise a Fall crop for Winter keeping, which keep with ease when put in a dark place and kept only a few degrees above the freezing point. One great reason for failure to keep potatoes is that they are kept too warm. A cold that will make ice on water will not hurt a potato in a barrel. If they could be kept in a uniform atmosphere of 33 to 35 degrees they would be all the better. Another reason for failure is keeping them in too light a place. Potatoes should be kept in total darkness and be put in total darkness as soon as possible after digging. Not a ray of sunlight should be allowed to reach them at any time. A few hour's sunning in the patch while digging will spoil the best Irish potato. The early crop may be kept until the late crop is ready, by careful management. Dig them when the soil is dry, and at once spread in a cool, dark cellar. In a few days overhaul them and pick out the rotten ones, and then sprinkle air-slaked lime all through the heap, and do not pile too deeply. If kept cool and dark they will not sprout until Christmas, when they will soon get worthless from sprouting.—*W. F. Massey, N. C. Experiment Station.*

A Singular Sweet Potato.

A curious freak of nature was found by Mr. Jacob Beck, on his farm near Benning, D. C., in the shape of a sweet potato which was dug up with others, but which differed from its fellows in being almost a perfect representation of a snake coiled. The coils were distinct from one another, and the shape of the head was clearly outlined as well as of the tail. It is a mystery how the potato came to grow in the particular form. It has been suggested that probably it grew in a space once occupied by a snake.

Thermoscope.

A sealed glass tube containing an alcohol solution of camphor gum is sometimes used as an indicator of temperature changes. When the temperature is high the camphor is all dissolved and the liquor is transparent. At a low temperature the camphor crystalizes out, forming a fleecy whitish looking mass. A thermoscope of this kind is sometimes sold mounted on the same board with a thermometer, and is often erroneously supposed to indicate changes in pressure or electrical conditions of the air.

PERSONAL.

Squire John C. Jones, a wealthy farmer and a prominent man, died at his home three miles south of London, O., Nov. 15, at the age of 77. He leaves nine children. Several of his sons are prominent in politics and business.

William R. Smith, for many years Superintendent of the Botanical Gardens in Washington, has, it is said, personally directed the planting of more than 6,000,000 trees in different parts of the United States.

Grand Lecturer of the National Grange, Mortimer Whitehead, made a tour a fortnight in length among the farmers in Colorado, and did good work wherever he went in explaining the nature, value, and objects of farmer organizations, and the good results so far achieved by them. A much greater interest in Grange work is the excellent result.

Nov. 16 Jerome F. Cobb, a pioneer of Kalamazoo County, Mich., died at Schoolcraft, in that County, at the age of 72. He went to Michigan from Connecticut in 1830, and was for 18 years Secretary of the State Grange; was editor of the Grange *Visitor* from 1876 to 1888, and was County Superintendent of the Poor for a quarter of a century, besides holding numerous other offices.

George E. Ford, the man who first began the manufacture of paper from the waste of sorghum mills in Fort Scott, Kan., is about 40 years of age. He is a typical Westerner, and in the last 20 years has made and lost several fortunes. In 1885 he started for London with the intention of joining Stanley's expedition to the heart of Africa. He changed his mind, visited Paris, then returned inside of a week to this country. Mr. Ford is worth about $75,000.

Capt. A. C. Barnes, who has been for some years in charge of the South American work in the Statistical Division of the Agricultural Department, resigned on the 15th ult. Capt. Barnes was admirably qualified for his work. He was for several years Consul at leading South American ports, where he acquired a thorough knowledge of Spanish and the resources of the countries. He turned this to good account in his work for the Agricultural Department, and his reports are mines of valuable information. He retires to his little farm near Washington, where he will occupy himself with farming and literary work.

Three brothers, Louis, Victor, and Charles Gustafson, went to Chino, Cal., three years ago without any capital, and bought 20 acres of ground on the edge of the town, agreeing to pay $175 an acre for the same. They began raising sugar beets, and this year made their last payment on their land, every dollar of which they made out of the ground. They have kept a careful account of all their expenses, charging their own labor at $1.50 a day a piece. This year they raised 436 tons of beets, which they sold at $4.50 a ton, and their account stands thus:

Gross returns, 436 tons		$1,962 00
Plowing 20 acres	$40 00	
Harrowing twice	12 00	
Seed	30 00	
Seeding	8 00	
Thinning	80 00	
Cultivating twice	12 00	
Weeding	20 00	
Topping	108 00	
Plowing out beets	40 00	
Hauling to factory	174 00	
Tare and factory ex	60 20	
Total expenses	584 60	
Net profit	1,377 40	
	$1,962 00	—$1,962 00
Net profit per acre		68 87

COMPLIMENTS.

I am very well pleased, indeed, with your paper.—H. A. BROWN, North Lima, O.

I like your paper the best of any farm paper I have ever taken.—W. F. WOOLEY, Troy, N. C.

I like THE AMERICAN FARMER the best of any paper that I can find. I wish that it would come every week, and would be willing to pay $1 a year for it.—ALBERT POLY, Smith Center, Kan.

I feel that your paper should be in the hands of every farmer. Certainly, I regard it the best paper for the price I have seen, and I shall not be backward about saying so. —D. MAGNER, Battle Creek, Mich.

A Splendid Paper.

Undoubtedly the cheapest agricultural paper in the country is THE AMERICAN FARMER. It is not cheap in the sense of inferiority or mediocre qualities, but in the fact of its large, excellent and instructive contents sent semi-monthly to subscribers for the low price of 50 cents. It is published at Washington, D. C., and was established 74 years ago. Numerous illustrations embellish its eight large newspaper pages. Every farmer in the United States ought to take it. Any person in the least degree interested in the farm or rural home will find its perusal pleasant and profitable.—*Dubuque (Iowa) Trade Journal.*

Recent Literature.

Edward Bellamy has written the story of How I Came to Write Looking Backward for *The Ladies' Home Journal.* He will tell, in connection with the history of the book itself, how the idea of Nationalism first suggested itself to his mind.

Frank Leslie's Popular Magazine for December is a splendid Christmas number, with a tasteful illuminated cover and an unusual quantity of excellent illustrations and good reading matter. Published at 110 Fifth Avenue, New York. Price, 25 cents.

The Thanksgiving number of *Harper's Bazar*, published on Friday of this week, will contain Them Chickadees, a story by Maria Louise Pool, illustrated by A. B. Frost; Peg Woffington, a parlor farce, by Fannie Aymar Mathews; What Parisiennes are Wearing, by Katharine De Forest; Fifty-cent Luncheons, by Helen Churchill Candee; Swept Away, a poem by Margaret E. Sangster, and other attractive features.

The Christmas number of *Harper's Magazine*, published this week, contains 10 short stories, including Thomas Nelson Page's humorous sketch introducing the Editor's Drawer, and an unusual number of beautiful illustrations. Timely and attractive features are the House of Commons, by Thomas Power O'Connor, with illustrations by Albert E. Sterner; The Old Dominion, a contemporary view of Virginia, by Thomas Nelson Page, with pictures by C. S. Reinhart, and an Outpost of Civilization, a sketch of Mexican ranch life, contributed by Frederic Remington, whose descriptions admirably fit his vigorous and characteristic drawings.

The Thanksgiving number of *Harper's Young People* is not only of extra size, but is filled with stories and articles suggestive of the Thanksgiving Day time, all of which are unusually attractive. The number itself contains 36, instead of the usual 24, pages of matter, inclusive of a special cover printed in color. The list of authors contains such distinguished names as Capt. Charles King, author of the new serial Cadet Days, just begun; Maria Louise Pool, the New England authoress, Ellen Douglas Deland, the author of Little Jem and other girls' and boys' stories; W. J. Henderson and R. K. Munkittrick, who write stories with so much humor; Kirk Munroe, the author of the Mates series, and other as popular authors. A Thanksgiving poem, by Margaret E. Sangster is one of the features of this unusually attractive number.

Special Offer.

Worthington's Magazine is a first-class, well-edited, well-illustrated periodical. Its regular price is 25 cents a number, or $2.50 a year. We will send it and THE AMERICAN FARMER one year for $2.50.

ALABAMA.

The Fine Opportunities It Offers Settlers.

EDITOR AMERICAN FARMER: After having resided in New York, Michigan, Wisconsin, California, and Arizona, and traveled extensively in most parts of the United States, I think Alabama offers better inducements to settlers than any State in the Union. I have resided here three years, am starting a fruit farm, and think the climate and soil especially adapted to fruit and small fruits; think grapes can be raised in this locality as successfully as in California, and sell for much better prices. Everything is in favor of the cultivation of small fruits and berries, climate, soil, and market.

And as to the healthfulness of this locality, I will back it against any place in the world. It cannot be beat. One coming here will find the people the same as any other part of the country—no better or worse, as far as I can see; one enjoys the same privileges here as in the North, East, or West, and all this country wants is development, to make it one of the very finest parts of the world. Why so much good land should remain idle while other places that cannot compare with this section in natural advantages are rapidly settling up, is a mystery to me. Here a man can get land cheap; have a good, healthful climate, and grow the best markets for everything he can raise; and I will say right here that he can raise anything here with proper care.

I wish it understood that I am talking of the country in the vicinity of Oak Grove, 13 miles north of Mobile. Other places here in southern Alabama may be just as good, perhaps better, but I am writing about the part I know by experience. Anyone coming here cannot help being pleased with the country, and he must do well if he tries.—FRANK MOORE, Oak Grove, Ala.

AN EXCELLENT COUNTRY.

Cheap and Fertile Lands in Mississippi for Fruit Raising.

EDITOR AMERICAN FARMER: I was born in Pennsylvania, moved to Illinois in 1847, lived there until 1862, went to Kentucky and lived until close of war. I then moved to Tennessee, lived there until two years ago last Fall, when I moved to this country, to engage in the horticultural business.

I think, for apples, peaches, plums, cherries, grapes, and all kinds of berries, that we have the very best country. Thousands of acres of land in this section can be bought at from 50 cents to $5 per acre, that will rival the famed fruit lands of California. As for health, I do not believe there is a more healthy country in America than right here. Good society; we have good Christian, high-toned people, and the ladies are the sweetest, purest, and best on earth.

In the country we have five months free school. In each of the incorporated towns have 10 months free school. Red clover and most all the tame grasses do well here. All the root crops, onions, potatoes, beets, etc., grow to perfection. It is a good average corn and wheat country. Hogs, sheep, and cattle are raised here cheaper than in any Northern State. Tomatoes, watermelons, cantaloupes, cucumbers, and all kinds of vegetables grow to perfection. I have just finished shipping a very profitable crop of strawberries and in two weeks will commence to ship dewberries, and blackberries, which can be had for the gathering all over the country. The climate is excellent; the mercury rarely goes above 92°, and seldom goes below 25° above zero.

This country offers fine opportunities for settlers. Our fruit trains place us as close to the markets as those living in Tennessee or Kentucky. Produce gathered this morning is in St. Louis tomorrow morning, and the following morning in Chicago, Cleveland, Milwaukee and St. Paul, Omaha or Pittsburg.—W. P. REA, Verona, Miss.

Prof. Thos. Shaw's Ideas.

When sheep or lambs are set aside to be fattened they should receive careful examination in reference to the presence or absence of lice.

In all feeding it is important that the animals be kept free from disturbance, but with sheep it is more so. It is so important as with sheep. This is owing in part to their natural timidity. They are not quick to detect the presence of a stranger, but they have an instinctive dread of dogs.

Regularity in feeding is important. It is not necessary to feed sheep more than twice a day, but where the daylight will admit of it, the more evenly that the 24 hours can be divided by the two feeds the better it is.

Of the two extremes it is better rather to feed out quite enough than to feed too much. It is therefore not wise in ordinary feeding to give the animals so much that they will leave some food uneaten in the racks. If any should be left, a little less in quantity should be given, and if any is rejected because of coarseness or unsuitability, it should be removed before a fresh supply is given.

Feed sheep ever so well and allow them to live in filthy quarters and they will not do well. Usually they should be given fresh straw not less frequently than every other day. In the wet seasons of peculiarly damp weather they should be given it more frequently. It should not only be given to them freely in the sheds, but also in the yards. When much prone to lie in the yards when they have the opportunity, it should be that it is so, for the sheep is an animal that is particularly fond of life out of doors.

Experiments have shown that the common sunflower exhales 12 ounces of water in 24 hours.

THE NATIONAL GRANGE.

The 27th Annual Convention of the Organization at Syracuse, N. Y.

THE ANNUAL meeting of the National Grange, Patrons of Husbandry, was called to order in the Alhambra Hotel, at Syracuse, N. Y., by Grand Master Brigham on Nov. 14. There was a large attendance, and the meeting was one of the most successful ever held.

George W. Stone, of Wilmington, Del., addressed the convention on the subject of "Governmental Control of Railroads." He said it was simply a business proposition. Nine out of 10 men would at once declare that the proposition was dangerous on account of the political power that would be conveyed. But it was no new thing for the Government to exercise a business function, and in no instance has it failed. In the main the Postoffice, the Army and Navy have been honestly and efficiently conducted ever since they were managed. Mr. Stone proposed to create a new department of the Government, to be called "The Department of Transportation." It would be a Cabinet office. He would organize a corps on the same basis as the Army and Navy. Its officers and men should be as free in their work as those of the Army and Navy. After the system was once organized the Government could purchase the entire railroad system of the country and give in payment its bond and secure a low rate of interest. All discrimination would instantly cease. The business of transportation would be conducted at cost, which would mean an enormous decrease in passenger and freight rates.

The report of the Overseer, E. W. Davis, of California, was read and adopted. He devoted a good deal of space to the utterances of the Secretary of Agriculture, J. Sterling Morton, at the Agricultural Congress which was held in Chicago the first part of last month. The words of the Secretary were criticized, and the Overseer stated that he would not have dared to speak so a little more than a year ago.

The National Lecturer, Mortimer Whitehead, next delivered his report. During the past year he has visited 31 States, and found the Order in a very good condition.

In the afternoon session the Steward, Eva E. Page, submitted her report. In closing she said: "The farmers should neglect no chance of connecting themselves with a good, live Grange and of patronizing our best schools. We are only advanced by proving ourselves greater than the position we occupy. The signs of the times indicate that the youth of our land will be called upon to bear responsibilities even greater than our own. Let each of us do our part in fitting the rising generation for nobly living and acting."

The following committees were appointed: Woman's Work in the Grange—Mrs. H. H. Woodman, Chairman, Mrs. C. E. Bowen, Mrs. M. L. Davis.

Investment and Loan Associations (appointed by the National Grange at the session of 1892)—George A. Bowen, Chairman, E. W. Davis, N. J. Bachelder, W. C. Gifford, J. B. Long, O. E. Hall, Aaron Jones, A. P. Reardon.

Credentials—N. J. Bachelder, Chairman, Aaron Jones, J. E. Blackford, Mrs. Mary M. Reardon, Mrs. Patience Hunt.

Order of Business—W. E. Harbaugh, Chairman, R. R. Hutchinson, G. B. Horton, Mrs. Grace B. Working, Mrs. Lucy G. Smith.

Division of Labor—D. W. Working, Chairman, O. E. Hall, A. M. Belcher, Mrs. M. J. Thompson, Mrs. Elizabeth Russell.

Publication—W. C. Gifford, Chairman, D. L. Russell, Alpha Messer, Mrs. G. B. Working, Mrs. L. M. Howe.

Claims and Grievances—C. H. Knott, Chairman, W. Churchill, M. B. Hunt, Mrs. Maggie W. Jones, Mrs. Amie L. Mull.

Dormant Granges—D. L. Russell, Chairman, J. M. Thompson, T. R. Smith, Mrs. M. A. Horton, Mrs. M. J. Belcher.

Accounts—A. M. Belcher, Chairman, W. E. Harbaugh, George A. Bowen, Mrs. E. M. Hall, Mrs. E. K. Long.

Mileage and Per Diem—J. M. Thompson, Chairman, D. W. Working, H. M. Murray, Mrs. M. A. Bachelder, Mrs. M. J. Belcher.

Finance—Alpha Messer, Chairman, J. T. Cox, H. H. Murray, Mrs. E. P. Wilson, Mrs. R. E. Cox.

Digest—M. B. Hunt, Chairman, James M. Bull, R. R. Hutchinson, Mrs. Eliza C. Gifford, Mrs. E. Z. Roache.

Ritual—J. E. Blackford, Chairman, J. T. Cox, W. Churchill, Mrs. M. J. Thompson, Mrs. Eliza C. Gifford.

Constitution and By-Laws—H. M. Murray, Chairman, A. P. Roache, E. D. Howe, Mrs. Anna M. Harbaugh, Mrs. S. G. Knott.

Co-operation—A. P. Reardon, Chairman, A. P. Roache, M. B. Hunt, Mrs. Hutchinson, Mrs. E. P. Boise.

Resolutions—John C. Higgins, Chairman, C. H. Knott, James A. Bull, Mrs. Lizzie B. Messer, Mrs. E. C. Higgins.

Good of the Order—Aaron Jones, Chairman, S. L. Wilson, George B. Horton, Mrs. Patience Hunt, Mrs. Mary L. Churchill.

Foreign Relations—S. L. Wilson, Chairman, R. P. Boise, E. D. Howe, Mrs. M. H. Murray, Mrs. M. S. Rhone.

Education—E. D. Howe, Chairman, G. B. Horton, T. R. Smith, Mrs. Lizzie B. Messer, Mrs. C. E. Bowen.

Transportation—R. P. Boise, Chairman, J. C. Higgins, W. E. Harbaugh, Mrs. M. M. Reardon, Mrs. M. H. Murray.

Agricultural—John B. Long, Chairman, A. P. Reardon, N. P. Bachelder, Mrs. E. Z. Roache, Mrs. Lucy G. Smith.

The report of the Executive Committee, composed of Leonard Rhone, J. H. Brigham, and J. J. Woodman, showed that at the close of the fiscal year, Sept. 30, the funds of the National Grange were invested and deposited as follows:

Loaned on real estate security.........	$46,333 32
Loaned on demand, personal security.	2,000 00
Deposited with fiscal agency, Farmers Loan and Trust Co....................	4,096 51
Total..	$52,429 83

An increase of $1,547.10 since last report.

The interest on the real estate mortgages is made payable on the 1st of October in each year, and all was promptly paid up to that date in 1892, consequently there is now due or has since been paid one year's interest on all investments made prior to that date.

Fifteen hundred dollars was paid in on principal during the last fiscal year, and four new loans were made, amounting in the aggregate to $5,233.32.

The real estate investments are now secured by 21 first mortgages on good farms. The largest amount in any one loan being $7,000 and the smallest amount $1,000. The $7,000 mortgage covers two farms. The securities are believed to be ample.

If this system of investing the funds of the National Grange is to be continued, it will be seen that as payments are made and new loans negotiated, the number of securities will be largely increased, and consequently the care and responsibility of making and looking after the investments will also be increased. And yet, the Committee has no other safer or more practical system for the investments to recommend.

The demand loan made by the Treasurer which, with interest, has been called in and deposited with the Fiscal Agency, was secured by his personal bond with sureties. The interest on the securities and deposits, as they now stand, will amount to nearly $3,000 a year, or about one-half the amount required to pay the expenses of the meetings of the National Grange. The Treasurer's report will show the amount of interest received from all sources during the last fiscal year.

The National Grange appropriated $1,500 for lecture and editorial work, of which not exceeding $600 was set apart by the Committee for editorial work, printing, postage, and incidental expenses, and the balance, $900, for lecture work.

There has been paid to Mortimer Whitehead, Lecturer of the National Grange, for editorial work and expenses, $614.36. For per diem and traveling expenses in lecture work, $477.61. The Worthy Master has drawn, for lecture work, $300. There has been paid to the State Lecturer of Washington $50. To S. L. Wilson, Master of Mississippi State Grange, $21.83. Total, $1,450.05. Balance unused, $36.20.

The report also spoke of the necessity of Grange literature. The value of the Grange press throughout the country is fully recognized. The committee also spoke of the unfriendly way in which they were treated when the Secretary of Agriculture was called upon. Several other matters were broached upon, the report closing with a eulogy on Mr. X. X. Chartters, an estimable member who died during the year.

The following officers were elected: Grand Master, J. H. Brigham, Ohio; Overseer, E. W. Davis, California; Lecturer, Alpha Messer, Vermont, Steward, M. B. Hunt, Maine; Assistant Steward, A. M. Belch, Rhode Island; Chaplain, S. L. Wilson, Mississippi; Secretary, Dr. John Trimble, Washington; Treasurer, Mrs. F. E. McDowell, New York; Gatekeeper, W. E. Harbaugh, Missouri; Ceres, Mrs. M. S. Rhone, Pennsylvania; Pomona, Mrs. Mary Reardon, Kansas; Flora, Mrs. A. L. Bull, Minnesota; Lady Assistant Steward, Mrs. A Horton, Michigan; Executive Committee, R. R. Hutchinson, Virginia; J. J. Woodman, Michigan.

The National Grange expressed its opinion of the Hon. J. Sterling Morton, Secretary of Agriculture, in the following forcible words:

Your Committee on Good of the Order, to whom was referred the resolutions of Enterprise Pomona Grange, California, and the resolution of Hope Grange, in the State of New York, in reference to the language used by J. Sterling Morton, Secretary of Agriculture, in his speech at Chicago at the meeting of the World's Congress, where he, in language unbecoming to a gentleman, much less a high official, no less than a member of the President's Cabinet, condemns and censures all farmer's organizations, and specifically mentioning the Grange in the following language, to wit:

"That the most insidious and destructive foe to farmers is the professional farmer, the promoter of Granges, and Alliances, who, for political purposes, farms the farmer; that he will not succeed better by forming Granges and Alliances which generally seek to attend to some other business than farming."

Resolved, That so far as the Grange is concerned there is not one word of truth in what the Secretary has said about it, but on the contrary it is strictly non-partisan and tends by all its teachings and principles to educate and elevate the farmer to higher and nobler citizenship, and does in a thousand ways improve the farmer in his profession by teaching the most approved methods of agriculture and in the marketing of his products of the farm, and in wisely using the money received therefor in beautifying and making the home of the farmer better, and increasing the intelligence and happiness of the farmer and his family.

Resolved, That in giving utterance to this calumny, the fallacy of which the Secretary must have known or could have known had he taken the pains to inform himself, he has proven himself unworthy of the high position he holds.

Resolved, That the President of the United States owes it to the farmers of America, the largest agricultural Nation in the world, and the largest single interest in the United States, that they should have a Secretary of Agriculture in sympathy with this great interest. We believe it to be the imperative duty of the President to immediately take steps to secure a Secretary of Agriculture who shall be in accord with that interest.

(Signed) AARON JONES.
GEORGE B. HORTON,
MARY L. CHURCHILL,
MRS. M. B. HUNT,

The resolutions were unanimously adopted, as was one instructing the Master and Secretary to communicate, over their official signatures, to the President of the United States, the "expressed contempt" in which the farmers of the United States, particularly the Patrons of Husbandry, hold the Hon. J. Sterling Morton, Secretary of Agriculture.

PENNSYLVANIA.

Farmers' Institutes for the Season of 1893-4.

Butler, Butler, Dec. 1, 2; Clarion, Clarion, Dec. 4, 5; Bradford, LeRoysville, Dec. 5, 6; Clarion, Sligo, Dec. 6, 7; Bradford, Canton, Dec. 7, 8; Dauphin, Gratz, Dec. 8, 9; Jefferson, Belleview, Dec. 8, 9; Jefferson, Sandy Valley, Dec. 11, 12; Crawford, Guy's Mills, Dec. 12, 13; Perry, Blain, Dec. 12, 13; Jefferson, Punxutawney, Dec. 13, 14; Montgomery, Hatboro, Dec. 13, 14; Berks, Fleetwood, Dec. 13, 14; Clinton, Lock Haven, Dec. 12, 13; Clearfield, Clearfield, Dec. 14, 15; Clearfield, DuBois, Dec. 15, 16; Chester, Phœnixville, Dec. 15, 16; Lycoming, Hughesville, Dec. 14, 15; Venango, Clintonville, Dec. 14, 15; Lackawanna, Dalton, Dec. 19, 20; Somerset, Somerset, Dec. 20, 21; Bucks, Richboro, Dec. 20, 21; Juniata, East Waterford, Dec. 20, 21; Franklin, Greencastle, Dec. 20, 21; Lackawanna, Moscow, Dec. 21, 22; Fayette, Uniontown, Dec. 22, 23; York, Red Lion, Dec. 26, 27; York, York, Dec. 29, 30; Lebanon, Lebanon, Dec. 29, 30; Bedford, Loysburg, Jan. 2, 3; Erie, Union City, Jan. 2, 3; Perry, Millerstown, Jan. 3, 4; Crawford, Spartansburg, Jan. 4, 5; Warren, Warren, Jan. 11, 12; Adams, Arendtsville, Jan. 9, 10; Luzerne, Dallas, Jan. 11, 12, Chester, Oxford, Jan. 16, 17; Tioga, Mansfield, Jan. 16, 17; Tioga, Knoxville, Jan. 18, 19; Adams, York Springs, Jan. 11, 12; Venango, Cooperstown, Jan. 16, 17; Philadelphia, Bustleton, Jan. 17, 18; Chester, Atglen, Jan. 18, 19; Luzerne, Huntington Mills, Jan. 19, 20; Mifflin, Lewistown, Jan. 19, 20; Snyder, Freeburg, Jan. 23, 24; Dauphin, Harrisburg, Jan. 24, 25; Schuylkill, Hegins, Jan. 31, Feb. 1; Wyoming, Tunkhannock, Feb. 13, 14; Montgomery, Norristown, Feb. 15, 16; Bucks, Doylestown, Feb. 17, 18; Bedford, New Paris, Feb. 20, 21; Washington, Burgettstown, Feb. 20, 21; Cumberland, Mechanicsburg, Feb. 26, 27.

INDIANA.

St. Joseph, County, South Bend, Feb. 1, 3; Elkhart, County, Goshen, Feb. 3, 4; LaPorte County, LaPorte, Jan. 31, Feb. 1; Porter County, Valparaiso, Jan. 30, 31.

The Truck Farmers' Protest.

Nov. 16 six members of Churchland Grange, Patrons of Husbandry, representing the farmers and gardeners of Norfolk County, Va., appeared before the Committee on Ways and Means. K. C. Murray, who was the spokesman, argued with great earnestness and force against any reduction of existing duties upon potatoes and other farm and garden products. About 1,000,000 barrels of potatoes are raised annually in the Norfolk district and shipped to Northern markets, together with millions of dollars' worth of other farm and garden products. Churchland Grange alone represents property interests valued at $3,500,000. Mr. Murray submitted many other interesting figures and facts showing the wonderful growth and immense value of the agricultural industries represented by himself and his colleagues. He said that the chief benefit derived by the farmers on the Atlantic Seaboard from a protective tariff was the duty on potatoes and other products of the farm and garden, and that the removal of the duty on potatoes would result in heavy importations of Nova Scotia potatoes, which come in ballast, paying little or no freight, and the labor in their production and the value of the land upon which they are raised being less than in the United States, the producers of potatoes here would be placed at a disadvantage if they were compelled to meet this competition.

Good News for Asthmatics.

We observe that the Kola plant, found on the Congo river, West Africa, is now in reach of sufferers from Asthma. As before announced, this new discovery is a positive cure for Asthma. You can make trial of the Kola Compound free, by addressing a postal card to the Kola Importing Co., 1164 Broadway, New York, who are sending out large trial cases free by mail, to sufferers.

RAIN MAKING, RAIN SAVING.

It is Utterly Impossible for Man to Control the Falling of Rain.

FOOD OF PLANTS must be dissolved before it can be available for use. No matter how large the quantities of the elements needed by plants the soil may contain, if there is not a sufficient supply of water to furnish these elements in solution the land will be destitute of vegetation. Consequently rainless regions are not adapted to farming or stock raising. Even in regions in which the annual rainfall is fairly large but is very unevenly divided, there are often periods of drouth, during which crops are badly injured, and in some cases are utterly destroyed. If the farmers in these sections could control the rainfall or could save for future use the surplus water which falls during wet periods, they could often avoid losses which, under present conditions they cannot escape.

On account of the great benefits which control of the rainfall would bring, the farmers of this country have watched with the deepest interest the experiments of Government agents, firms, and individuals with various methods for bringing rain from the sky at will. As was foreseen by scientists, the outcome of these experiments has been failure. The power of man to cause any quantity of rain to fall upon an extensive area of land is as weak as his ability to change the cold of Winter into the heat of Summer.

Not only is it beyond the power of man to cause rain to fall at any time desired, but with the exception of circumscribed areas, it is equally impossible for him to store for use in time of drouth the water which is not immediately required by growing crops. And, as far as profit is concerned, the securing of water at will from rivers, lakes, or artesian wells, is also beyond the power of the great majority of farmers. For them rain making and, as far as large quantities are concerned, the storage of rain are out of the question. To quite an extent, however, rain saving is within their power. It is to be secured by processes which prepare the soil in a manner which will enable the plants to make the best possible use of the water which falls upon it, supplemented by those which cause the absorption of moisture and retard evaporation from the land. Some of the more important of these processes will be briefly indicated.

Careful preparation of the soil before the seed is planted or sown should always be made. If the land is naturally wet it should be thoroughly drained, for strange as it seems, many fields which are very wet when the rainfall is abundant suffer greatly from drouth when there is but little rain. Under the influence of heat certain kinds of soil, when deprived of most of their moisture, become so hard as to be almost impervious to the roots of plants. Thorough drainage prevents the land from getting into this condition and greatly mitigates the evils which undrained soils of certain descriptions must suffer in time of drouth. And whatever the natural condition of the soil in respect to the water supply, it is of great importance that it be thoroughly pulverized when preparations for planting or sowing are made. Good plowing and harrowing will so loosen the soil as to enable the plants to readily push their roots through it in search of food and moisture, and will give the plants a degree of vigor which will enable them to resist the evils of drouth much more successfully than they otherwise could do. Enrichment of the soil with suitable manures and fertilizers will also greatly strengthen the plants, and in many cases will enable them to safely pass through drouths which on poor land would prevent the growth of paying crops.

Mulching is often recommended as a method of rain saving. It tends to prevent the escape of moisture from the land, and under certain circumstances proves very beneficial; but for obvious reasons it cannot be adopted on an extensive scale. In practice it is applicable only to very limited areas.

Keeping the soil free from weeds is an important means of saving, for the use of cultivated plants, the rain that falls upon the land. Many farmers appear to regard weeds as mischievous only by their use of plant food and their interference with the work of cultivating; but it is probable that in numberless cases they do far more injury by using water which is needed by the crops than they do in all other ways combined. Carefully conducted experiments lead to the belief that for every pound of dry matter formed by a plant in the course of its growth it uses not less than 300 pounds of water. From this it will be seen that in a field that is stocked with rank weeds an immense quantity of water that should be, and if the land were clean would be, available for the use of the crop is diverted from that purpose and is utterly wasted. It not infreqently occurs that there is plenty of rain to supply the cultivated plants, but not enough for both the crop and the weeds with which it is infested. In such instances the crops are injured and the owner suffers an entirely needless loss.

As far as hoed crops are concerned, another, and upon most soils a very efficient, means of rain saving is found in frequent but shallow cultivation. Even in very dry times the air contains a good deal of moisture. During the night, when the temperature is much lower than it is during the day, a portion of this moisture is condensed and is deposited upon the surface of the land as dew. A good deal of this, together with moisture from the air, which circulates through a mellow soil, is absorbed by the ground and is thus made available for the use of plants, while nearly all the dew that falls upon a compact soil is quickly evaporated and does not benefit the crops. Consequently, frequent stirring of the surface soil in a dry time is an important means of securing moisture for the use of plants.

As far as it goes, and it goes a good ways, it is equivalent to rain-saving. It certainly utilizes considerable quantities of water which, as far as the plants are concerned, would otherwise be lost. In order to prevent injury to the plants by too severe root pruning, the cultivation should be shallow, but there is no danger of performing it too often. It is particularly important to attend to it immediately after a rain, as the falling of water will cause the formation of a crust upon the surface of the land which will prevent the free circulation of air and reduce the absorption of moisture, both of which are necessary to the perfect utilization of the rainfall.

As in other lines of effort, preventive measures yield far more satisfactory results in contending with drouth than do efforts to remove the evil after it has been established. Cultivation should be commenced before the crops actually suffer from want of sufficient moisture, and should be performed at intervals varying in length with the severity of the drouth. It will not accomplish anything in the line of rain-making, but it will, if properly directed, to a certain extent answer the same purpose by saving for the use of crops the rain which falls upon the land.—ELLIOT, Buffalo, N. Y.

SOME PERTINENT QUESTIONS.

A Subscriber who Would Like to Gain a Better Idea on Good Roads.

HAVING READ quite an extensive article on the eighth page of the 1st of October paper, entitled, "Road Making," I wish to ask a few questions for the purpose of gaining some knowledge on the subject. I do not wish to be understood as criticizing the ideas and statements of the writer, but for my life I cannot see what he means by his article.

I, however, understand him to say that if we want to improve the condition of our roads that we should stop working them. Now, let me ask what to do now if we stop?

He also gives us farmers a hard "knock" when he says "the labor done is worse than thrown away, for it is rare, indeed, for either the overseer or the men under him to have any clear comprehension of what is needed." Please let me ask again if the farmers who have hauled their crops to market over the roads, and have traveled over them from childhood up to the age of 50 and 60 years, and have had experience in working the roads all their lives, I ask if they are not quite as likely to know what is needed as the one who composed the article to which I allude.

In the last paragraph of his article he says: "But it is within the means of every neighborhood in the United States to materially improve their roads at once, and it can be done in three or four or five years without spending one penny more than is now spent in the hurtful methods mentioned."

That seems to me very unreasonable; but as I am one of those very ignorant farmers who do not "have any clear comprehension of what is needed," I suppose I am excusable for being so shortsighted as not to see how that can be done. But if the writer is blest with some kind of a supernatural knowledge on road making, will he be so kind as to fully explain his methods to us poor, ignorant, almost God-forsaken farmers in the next issue of THE AMERICAN FARMER, so that we may do something on the roads that is worth doing.

If the writer has any theory by which we can make within five years time a road that will need none of the work like we do on them without increasing the present cost, for the sake of our ignorance let us have it, and have it quick. We are unlucky in another thing—we are not so blest as to be able to regard working out our tax as a kind of "holiday outing, a picnic frolic, and a means of getting rid of so much tax." No, but it is a job that we indolent, ignorant farmers very much dread, for in our estimation the overseer and all together have some idea of what is needed, and we go at it and do it and find it no easy job.—FARMER TRIXIE, Eagle, Neb.

Efforts to domesticate the quail have been persisted in by many people, but generally with indifferent results. Robert Jenkins, of Richmond, Ind., however, claims to have recently tamed a brood of quail, who live on his premises, showing no indication that they prefer the woods and fields.

Anæmia

is depleted blood. The blood lacks richness and the cheeks lack color. The whole system lacks the nourishment of

Scott's Emulsion

the Cream of Cod-liver Oil. This nourishing, palatable food restores a healthy color, enriches the blood and tones up the whole system. *Physicians*, the world over, endorse it.

Don't be deceived by Substitutes!

Prepared by Scott & Bowne, N. Y. All druggists.

BROOKSIDE FARM PAPERS.

A Variety of Farm Products Discussed—Thoroughness in Tillage.

ACTING on the belief that what is worth doing is worth doing right, we prepared our wheat ground with great care. We followed the plow closely with the harrow and roller, so as to prevent any loss of moisture, which is important in a dry season. Including the drilling, it was worked 11 times, and it was about as fine and compact as it was possible to get it, making just such a seed bed as wheat delights in. We used the roller five times, including once after it was sown. For several years we have rolled a part of a field as an experiment, and always found it beneficial. In the future we shall always roll it after the drill in a dry season. In a wet season it is not so necessary. I consider a good land roller an indispensable implement, and one that every farmer should have. It is much superior to a brat or any other implement for pulverizing and compacting the soil. Any farmer of ordinary ingenuity can easily make one during the leisure hours in the Winter at a cost of about $5 besides his work, and it will be worth from $10 to $25 to him every year, depending on the size of his farm, if he uses it as he should. We use it in the Spring to roll our mowing land, and in the preparation of the oats and corn ground. I will give full directions for making one sometime before next Winter.

EXPERIMENTS WITH FERTILIZERS.

We commenced sowing wheat Sept. 11, and finished (though not sowing continuously) the 18th. We sowed about five acres as late as Oct. 1, and got it in proper shape. It is a strip of low, black ground that remained wet too long to put in oats last Spring. It is very rich, and can be sowed considerable later than most other soils, and still get strong enough to stand the Winter.

We planted part it too late for fodder corn for soiling the last week in June, and it proved a valuable addition to our short pastures. The balance laid idle all Summer. We meant to follow it immediately after harvest, but the continued drouth made it almost impossible. I am very anxious to get it seeded to grass, with the remainder of the field, which is seeded to wheat and timothy, and will be seeded to clover in the Spring, according to our usual custom. Rye can be sown a month later than wheat, on rich soil, and yet do well.

On the greater part of our ground, 16 acres, we used different kinds of fertilizers, at the rate of 150 pounds per acre. We used a pure phosphate, phosphate and bone, half and half, and pure rawbone, with the intention of determining which is the most valuable to our soil, and it can be decided by actual test better than any other way.

The soil is a sandy loam, principally with a few clay-spots. The field was in wheat last year, and made a fair crop, averaging about 22 bushels per acre, with but one light application of manure in the last five years. It is said to be the thinnest field on the farm. The entire farm was very much exhausted, having been used as a tenant farm for over 20 years previous to our purchase of it in March, 1888. We have never used commercial fertilizers on Brookside farm until now, and the results will be watched with interest, and the results reported in THE AMERICAN FARMER.

The state in which the last tenant left the farm can best be judged by the yield of wheat in 1888. There were 28 acres in wheat, and the tenant thrashed 361 bushels, and that of an inferior quality. The following year we thrashed 560 bushels, and the next year 760 bushels. The acreage did not exceed 30 either year. The increase was more due to better tillage than any other cause, for we believed then, as we do now, that it is the extra cultivation that pays the extra profit.

A WORD ABOUT FRUIT.

Five years ago, when we purchased Brookside farm, the fruit trees outside of apples did not number over a dozen, and not a single grape on the premises. True, there was a thicket of Morella cherries in a corner of the garden, grown up haphazard, just as nature permitted. We dug them up carefully, culled them closely, and planted only the best. With those and other varieties, we have now nearly 30 cherry trees coming into bearing. Our plums and peaches number about the same of each, with about a dozen pears and 90 grapes, the majority planted last Spring. The peaches are principally seedlings and homegrown. In canning, we selected the best of different varieties, planted the pits in rows in the garden in the Fall. The following Spring they came up and were cultivated a year where they stood and afterward replanted.

Trees raised in this way are much more hardy and surer bearers than the most of the high priced nursery stock is apt to be, and besides you have the satisfaction of knowing that you have not been humbugged by any smooth tongued tree agent. Deception is so easily practiced in the nursery business that it is very trying to the average agent to be strictly honest. Peaches come into bearing very early. I picked fruit this year from trees that grew in four years from the pit. Farmers make a great mistake when they do not plant more fruit trees than the most farms now contain. There is no reason why farmers should not subsist largely upon fruits, fresh or canned, the greater part of the year. Our aim has been to plant early, medium, and late of all varieties, so as to have a succession of fruits the greater part of the season.—O. J. VINE, Ohio.

COLOSSAL RESOURCES.

The Youcalla Region of Oregon—A Section Destined by Nature for the Agriculturist.

THE location of Youcalla is phenomenal, and the undeveloped tributary resources are simply an aggregation colossal and unapproachable. The altitude of Youcalla is 500 feet above sea level, 35 miles from tidewater on the west, and permits an ocean breeze, pure and sweet, to waft its purifying effects over the entire country. It is above the line of early and late frosts, and above the fogs that so often cover the lowlands. Situated in a beautiful rich valley, stretching out north and south in broad relief, we see on the east and west the lovely foothills—slopes of rich soil so much desired for splendid orchards and superb homes. Indeed, this is a location destined by nature to draw to itself the culture, taste, wealth and enterprise that seek expression in the form of beautiful homes and grand orchards. For this purpose it is ideal. A few miles south of Youcalla the Umpqua River is found making its way to the ocean, a distance of about 60 miles, where a splendid ocean harbor offers this great inland empire cheap transportation to the great markets of the world.

Along the Umpqua River there are many thousand acres of Government and railroad land, rich soil and magnificient timber, offering homes of comfort and plenty to an industrious and enterprising people, and about 40 miles east is the great Bohemia Gold Mine. Here, at no distant day, we shall find a railroad of about 50 miles, opening up a great inland empire which in the superb grandeur of its fairly bewildering richness, in all the resources that make the people rich and happy, has no equal on the Pacific Coast. What a glorious future, and yet how few have the faintest conception of its unapproachable magnitude; but to the writer these things appear in all the brilliancy of their grandeur and magnificence. With this grand picture, true to life, we have not given half of the wonderful array of possibilities of this great inland empire. There can be found many townships of fine timber land, affording grand opportunities for capital and enterprise.

North we find Elk Creek, running to the ocean, furnishing the best water power in the world, almost sufficient to propel the great industries of a continent, inviting capital to invest in paper mills, woolen mills, saw mills, furniture manufactories, and enterprises of all kinds that will disburse annually many millions of dollars to operatives in factories and the producers of the necessary staples of life. This will give the reader a glimpse of the future of the great inland empire, which nature has with prolific and unapproachable generosity created to build up, maintain, and constitute through the irresistable laws which control the commerce of the world—the future greatness of Youcalla as a railway city of great wealth and importance. Youcalla possesses possibilities and opportunities in a geograpical location that simply commands beyond a possibility of competition not only the resources given by the writer, but a great deal more that will go to swell the great tidal wave of her future prosperity.

The city is situated on the Oregon & California Railroad, 166 miles south of Portland, in Douglass County. A little over one year old, she now has a population of over 400, a splendid location for a newspaper, flour mill, boot and shoe store, harness shop, and a good location for first-class hotel. We raise all kinds of fruits and vegetables without irrigation, have no cyclones, no blizzards, or thunder storms, and no malaria. I invite all who are tired of living in blizzard stricken regions to come and see this country, believing if you do you will agree with me that this is the Italy of America, with green grass all Winter.—W. BRUMMETT, Youcalla, Oreg.

A Letter From Oregon.

EDITOR AMERICAN FARMER: Stock of all kinds look very well. Although this has been an "off year" for wheat, the yield has been very good, ranging from about 16 bushels to 45 bushels per acre. Oats did fairly well, but the yield could have been better in some cases without stretching the usual general average.

The fruit crop will be good, although the rain caused a great many of the prunes to burst, and a few peaches rotted under the trees. Several carloads of peaches were shipped from here recently, all of fine quality and large size. Fruit drying has commenced, and there will be about 20 carloads of dried prunes shipped from here this season.

Considerable Fall grain will be sown this season, some Summer fallow having already been put in.

The farmers of this portion of southern Oregon do not feel the financial depression as much as some other parts of the State, from the reason that diversified farming is engaged in to a larger extent.

Winter does not commence here until about the 25th of Dec.

Wheat is selling for about 50 cents per bushel, and flour at $3.60 per barrel.

Hood's Sarsaparilla Cures

My "grand daughter, Grace E. Nash, of Boston, while visiting at our house three years ago, fell from a hay mow and struck on her head. She was taken immediately to the city hospital, Boston. The skull was badly crushed. Blood poisoning set in and the child failed to rally. I gave her Hood's Sarsaparilla. In a short time she had completely recovered." MRS. SOPHIA RANDALL, South Acton, Mass.

Hood's Pills cure all liver ills, biliousness.

THE OWEN ELECTRIC BELT AND APPLIANCES FOR MEN AND WOMEN

CURE MANY DISEASES WHEN ALL OTHER REMEDIES FAIL. GET ONE.

TONE UP THE SYSTEM AND RESTORE LOST VIGOR. TRY ONE.

[TRADE MARK.] DR. A. OWEN.

A GENUINE CURRENT OF ELECTRICITY
Is generated in a battery on the Belt, and can be applied to any part of the body. The current can be made mild or strong as the case may require, and is absolutely under control of the wearer at all times.

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Contains fullest information regarding the cure of Acute, Chronic, and Nervous Diseases, Sworn Testimonials with portraits of people who have been cured, Price Lists and Cuts of Belts and Appliances, and how to order, published in English, German, Swedish, and Norwegian Languages. This Catalogue will be mailed to any address on receipt of six cents postage.

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When writing mention this paper.

The rainy weather broke up the southern Oregon district fair when about two-thirds through.—W. T. FOGLE, Oregon.

CORN IN GERMANY.

Our Cereal Will be Used as Food for Horses in the Empire.

The recent advices communicated through the Department of State from our Consular force in Germany to the effect that directions have been given by the military authorities in that country to utilize Indian corn as part of the rations for army horses will lend interest to the following extract translated from the *Deutsche Landwirthschaftliche Presse*. With the present high price of all kinds of fodder on the continent of Europe the action of the authorities will no doubt greatly enlarge the use of corn:

"Indian corn may be fed without injury to the health of the horse, and may be substituted for oats, provided the corn is of good quality. But as not all horses, especially the old ones, are able to munch and masticate hard corn and to digest it thoroughly, it is necessary that it should be kibbled (rough ground) before being fed. The great quantity of farinaceous matter in corn permits the addition of other material, which, though alone not fit for horse feed, is cheaper, and by being mixed with crushed corn will make proper and good feed. This has been done for years whenever the high price of oats and the need of substituting for them other material made it desirable. A mixture may be prepared by using crushed oats, crushed grain, malt dust, bran, etc. At the present high price oats are little used, and a mixture for work horses is prepared of 50 per cent. crushed corn, 15 to 20 per cent. crushed beans, 10 to 15 per cent. bran, 10 to 20 per cent. malt dust. The daily ration varies from 10 to 15 pounds of this mixture, according to the work required, and 7 to 8 pounds of lucerne hay. The several parts are well mixed with chopped straw and wheat chaff, and a little moistened. To purchase corn already crushed is not advisable, because a second or third grade quality of grain may have been used."

Another opinion is as follows: "There is no objection to discarding oats as horse feed, in part or entirely, and to substitute corn therefor; but it should not be done pound for pound or measure for measure, and other substances must be added and mixed with it, for the reason that oats contain more nitrogenous matter, wood fiber, and ashes, but less raw fat and less extract matter free of nitrogen than corn; for instance, 72.52 kilograms (159.88 pounds) of corn, 17.70 kilograms (39.02 pounds) of beans, and 7.80 kilograms (17.2 pounds) of chopped straw contain about the same quantity of nutriment as 100 kilograms (220 46 pounds) of oats. Other mixtures whose nutritive value equals that of 100 kilograms (220.46 pounds) of oats are: 70 kilograms (154.32 pounds of corn, 4.5 kilograms (9.92 pounds) of ground meat, and 5 kilograms (11.02 pounds) of chopped straw; or 50 kilograms (110.28 pounds) of corn, 25 kilograms (55.12 pounds) of palm cake, and 2.5 kilograms (5.51 pounds) of sesame cake. The first mixture is especially recommended for such times when oats are high. The corn should not be fed whole, however; its hardness very soon tires the masticatory muscles, so that the horse will refuse it. On the other hand, it must not be crushed too fine, because most of the meal will then be deposited and remain at the bottom of the manger, and in that state the horse will also refuse it. The best way is to crush it coarsely.

If oats are fed in addition they ought to be whole; beans should be crushed, and plenty of chopped straw should never be wanting. A dry mixture of oats, crushed corn, and chopped straw is liked and well digested. The transition from oats to corn should not be sudden, but gradual, especially if a total substitution of corn for oats is intended. Very acceptable is a slight addition of salt in the beginning of this transition period."

Paynter Frame, a farmer of Susex County, Delaware, has shipped to President Cleveland a watermelon weighing 72 pounds and measuring 18 inches one way round and 60 inches the other. It is in Mr. Frame's region that watermelons are varnished and kept to grace the Christmas dinner table. It is here, too, that the pulp of the watermelon is boiled and preserved in sugar as a Winter delicacy.

Undismayed.

Though humble be thy lot in life,
  And fame withold her laurel crown,
Think not thy toil ignoble strife;
  Let not thy spirit be cast down.

For even in thy low degree,
  Though welcome praise be never won,
It counts for honor unto thee
  If what thou doest be well done.
—*Alice Rockwell Thorne in Ladies' Home Journal.*

ELLEN TERRY, the popular actress, when asked how she preserved her youth, said by a busy life that crowded out the little worries. She sleeps in a cold room, lives in cool rooms, eats plain food, rare beef, mutton, and toast. She drinks tea many times a day, and avoids chilling her stomach by drinking cold water. She says she is far too busy to have time to think about the styles or fashion.

* * *

MRS. MARY G. BRYAN, who has probably the largest salary of any literary women in America, though Mrs. Frances Hodgson Burnett is said to have made a larger fortune, receives $10,000 a year from the publisher of a New York periodical in return for writing two serials a year and a short story each month, as well as answers to correspondents. She is a Florida woman, the daughter of Maj. John Edwards, of Tallahassee, and was married at the early age of 15 to Mr. John Bryan, of Louisiana, where she did her first journalistic work on a little paper just after the war.

A Florentine Philosopher.

Paolo Mantegazza, in giving his opinions of women in a German paper, does not express himself upon the American woman.

He gives the palm for beauty to the Spanish women, thereby showing keen discrimination and excellent taste. His praise is not, however, wholly unmixed. "The Spanish woman," he says, "is bewitchingly beautiful. She has small hands and feet, and large eyes like the open windows of a sunburnt marble palace. A figure full of grace and life, and long, wavy, dark hair. She is very religious, very ignorant, very jealous, sensitive, idle, and proud."

The English woman, he thinks, is beauty itself. "Her hair is like gold. She has heavenly eyes, a peach-like complexion, a delicately formed nose, and good teeth. She is reserved, a little hypochondriacal, very active, and generally a slave to etiquet." But the French woman is "a cat and serpent, a palm and a violet, and even when she is not pretty she is charming. She is amiable, a dreadful coquet, and generally false."

The women of Germany are not graceful as a race, but are strong and withstand the ravages of time. They are "blonde, blue-eyed, with white skins, and are more suited to play the part of wives than lovers. They are naive, good-natured, and industrious, and make splendid housekeepers and mothers. They are, on the whole, the best educated women in Europe."

The Russian woman is an Oriental type which has been prematurely transplanted to Europe. "In her is combined the extraordinary charms of a savage and a highly civilized woman."

The Italian woman is fond of art, sentimental and modest, but is generally ignorant, and is often false. Two important points in forming the character of the women of different Nations are, according to Mantegazza, the religion and the amount of freedom they enjoy. The greater the freedom allowed the more virtue. This last will please Americans.

FASHION'S FANCIES.

What the Little Folks Wear.

The most striking features in children's styles this season is the closeness with which they follow the styles of their elders. The little girls wear berthas and bretelles, epaulets, and revers, puffs and ruches, with the same lavishness as their mammas.

Until boys are advanced to the dignity of trousers they wear kilted skirts, generally of plaid, muslin blouses, frilled with lace, and little velvet jackets. Sometimes a bright woolen jacket is substituted.

Smocking is also a favorite form of trimming children's frocks. A dress of fawn colored fayette has a smocked yoke, cuffs, and belts, the stitches caught with gold colored thread, while a little red frock is smocked with black.

All the children's coats are full in the skirts this Winter. Most of them are double-breasted. Smooth finished cloth takes precedence over rough, and the brightest shades of brown, blue, and green over the darker. Furs and braids are the preferred trimmings, and shoulder capes accompany almost every coat.

Cheviots and tweeds are as much worn by little girls as by their mothers. One of the prettiest gowns made this season is of brownish cheviot, the full skirt fastened to the bodice by a cording of brown velvet, and broad brown velvet revers. The sleeves are puffed to the elbows, where they end in brown velvet cuffs.

Simple little gowns of colored cashmere to be worn with white muslin guimpes and sleeves are favorites. Sometimes these hang full from a plain or embroidered yoke band, and sometimes they have slightly fitted bodices, with tucks and feathered stitching attached to the full skirts. The skirts are generally untrimmed, except for a row of feather stitching in silk above the hem.

The babies, of course, wear white muslin slips. The trimming most popular is fine drawn work. Hemstitching and tucks are also favorites in this department. Babies' cloaks are of soft white cashmere or white bengaline, trimmed with white lambs' wool. The most popular cloak consists of the usual long, loose sacque, coming quite to the bottom of the dress, with three or more capes of various lengths above. The hoods for babies are white quilted silk, with a band of white lamb's wool close to the face.

Until girls are about four years old they wear white and pale colors, with bengaline cloaks and bonnets. After that age their wardrobe admits of more variety. They have woolen frocks of all colors, woolen cloaks and felt hats. All their dresses, however, are made in one piece until they are 16, when they are promoted to the dignity of separate skirts and bodices. Until they are eight or nine years old their frocks hang simply from a yoke. Between nine and 16 their bodices and skirt pieces are sewed together at the waist line, with either a cord, piping, or narrow girdle to conceal the joining.

HATS FOR CHILDREN.

A beautiful hat for a child is of white stiff felt. It has a round crown and rather a wide, straight brim, neither caught up anywhere nor convoluted. The principal trimming is the head and brush of a white fox. The brush is long enough to encircle the crown, and is touched with black. How faithfully it accords with nature in its make-up is immaterial, since as a trimming it is very effective. A few black velvet loops and a jet pin assist the fox head, which is quite large, in ornamenting the front.

With this hat is worn a full-length coat of black velvet, bordered with white fox. There is a collaret of the fox, and a muff suspended by a heavy cord of jet beadwork.

Nothing can be prettier for the children than the styles of to-day. Every new costly fabric, expensive trimming, all fancies and fads of their mammas are adapted to them also.

HOUSE JACKET.

Something for a fancy waist to wear in place of a heavy basque is always in demand, and never more so than at present.

The cut shows one of silk trimmed in black lace. To suit the figure it may be made a round waist slightly pointed back and front, or it may be made full and fitted down.

If it is belted down, it is quite as becoming to a very slight figure to have the waist extend four inches below the belt.

This style is one quite readily made from small pieces, as the sleeves and yoke are made of short lengths.

The yoke is alike back and front, and the same general curved outline preserved.

Should a belt be used it is pretty to have a shirred roset at the fastening.

Almost any color may be used that is becoming to the wearer. Especial care should be used to select something that is pretty by lamp light.

Dressmaking Classes.

Just now, when people are beginning to come back to town to take up their city pleasures, it is interesting to know of the classes forming for the improvement of our young girls. Among those worthy of attention are the classes in dressmaking and fine sewing which are being organized again in New York City.

The pupils taking these lessons are not only those who do so with the view of making use of the knowledge for themselves or as a profession, but are also those who take them as part of a practical education. The instruction is of the best, and in the dressmaking class each pupil makes a dress during the 12 lessons, under the supervision of the teacher. This department has been a great success in the past, and in these days, when old-fashioned accomplishments are coming in vogue, it seems quite worth while to see what one can do in this direction.

In the classes in fine sewing pupils will be taught to cut and make baby dresses, little wrappers, and all kinds of dainty work.

[Contributions solicited from all readers.—Ed.]

A MODEL LAUNDRY BAG.

Some ingenious person has watched a pack peddler to some purpose. Take, for instance, pretty blue and white gingham. Take two yards and divide it into two equal pieces. Lap the selvages and stitch flatly on the machine. Hem the ends and leave the selvages at the edge if you wish. Take four pieces of tape six inches long and make into loops for the corners, and the bag is completed. It is not easily torn, you can readily find what is in it, and you may manipulate it with one hand.

In making up your laundry list the contents are seen at a glance as soon as the bag is taken from its peg. It is easily laundered and serves as a cover to and from the laundry.

PHOTOGRAPH CASE.

What shall be done with the photographs which are yearly on the increase?

There have been albums and photograph frames and bags, both small and great, in which to deposit them, and still they accumulate.

A pretty idea for a photograph case is to take a piece of cardboard of any size desired and cover plainly with pink silk. Cover another piece, slightly smaller, as in drawing, joining this to the first, and still another piece, slightly smaller than the second. Embroider delicate maidenhair ferns in natural shades in corner four, tacking this to the third piece of covered board. Or this corner may be made of white or ecru leather. Fasten the outside edges together, leaving spaces between each card for the photograph, and finish the case with a bow of pale green ribbon to match the ferns.

For amateur photographers another suggestion is to make an album of water color paper, in which the unmounted "snap shots" are to be pasted and each photograph outlined with splashes of gilt. The outside of the album is of heavy pasteboard covered with linen, and decorated with lettering suggestive of contents. This classifies the photographs and gives one's friends the pleasure of a camera's sketchbook.

CHRISTMAS HINTS.

EDITOR FARMHOUSE: Let me tell the readers of this paper of a few Christmas presents which I have made.

A novel pincushion is made by cutting a maple leaf from cardboard. Glue thin layers of batting on both sides, then cover with dark green velvet; buttonhole. Stitch the edges with a lighter shade of green silk, work the veins with the same, and hang with silk cord and tassel. The pins are stuck around the outer edge, leaving only the heads to show.

A penholder is made of an old horseshoe in which the nails have remained, gild the whole, fasten a support to the back by means of a wire. Take a little china doll, dress with a silk dress and a number of flannel skirts to serve as penwipers, and fasten to the top of your horseshoe. The nails serve to hold pen and pencil.

Take blotting paper, cut in squares, rounding the edges. Cut a piece of celluloid the same shape, paint a spray of flowers on this; punch holes through the top and run a narrow ribbon through these and the blotting papers. Fasten and tie in a pretty bow.

A shaving tablet for gentlemen is made by taking two pieces of celluloid, 6x4 inches, scallop the edges, cut about a dozen tissue papers the same size, lay between the sheets of celluloid, punch holes through the top for a ribbon to run through, by means of which it can be hung up; paint a spray of flowers on the front side with a small memento, as "with best wishes," etc.

For a needle book, take six pieces of flannel 4 x 4 inches and two pieces of plush 4½ x 4½ inches. Line the plush with satin, turn the edges of both the velvet and satin over and buttonhole stitch around the edge. This serves as a cover. Fold the flannel like a book, put the velvet on the outside, and fasten together at the back. If a spray of flowers and the initials of the recipient are worked on the velvet before it is fastened to the satin, it will look nicer.

A dainty calendar. Take a piece of cardboard 6x8 inches cover one side with plush the other with creton. Take a small calendar (which can be made by cutting the months from the cover of an almanac and sown together), fasten it. To the middle of your plush a support for the back and a bow of ribbon for one of the upper corners completes the calendar.

I have just completed a nice present for one of my friends, consisting of a pair of toilet bottles and a jewelry case. For the toilet bottles I took short, round bottles, just the size of ordinary toilet bottles. I covered them with red satin and made a lace frill for the top. I took plain corks and fastened seashells to the tops, as I did not have any glass stoppers. For the jewelry box I used a collar box; covered it with satin to match the bottles; made a pincushion for the top, which I covered with red velvet. The cover was fastened to the box with narrow ribbons, the inside lined with folds of white satin, and a lace frill, the same as on the toilet bottles, was sewed to the cover.

I would tell of more things, but I have taken too much room already. Only a few words in regard to the poor at Christmas time.

There are plenty who think themselves too poor to spare anything, who could yet gladden the hearts of many with trifles scarcely noticed by them. Save up all your papers that have bright and good reading in them and distribute them to poor children and invalids who cannot afford to subscribe for papers.

There are many children who cannot attend school for the want of books, their parents being too poor to buy them; or, as is often the case, do no not care whether their children get any education or not. If, therefore, you have any school books which your children do not need any more, give them to such as you know can use them. Plant it also in your children "That giving and getting together be found." By letting them give some of their plentiful share to some poor girl or boy who did not get any present on Christmas urge them to do so, and let them take it to the poor themselves, so that they can see what pleasure is found in giving. Wishing you all a Merry Christmas—MARY THRESIE.

WOMEN'S WISDOM.

TO EVERY WOMAN.—For the present, we have this broad offer to make to all readers of The Farmhouse Department: We will give a full year's subscription to THE AMERICAN FARMER to each friend who will send one-half column of available matter within that year. Subscription may be a new one, or it may be an extension of one already in our books.

CONDITIONS.—But note this: We shall apply at least three tests to every article, viz.: Is it brief? Is it fresh and bright? Is it really interesting to women? Let intending contributors apply these tests before sending their matter. In range of topic these may cover everything of special interest to women. Indifferent, prosy, or stale matter is not wanted. We want to hear from our cleverest women, with facts, fancies, and experiences all their own; about their housework, fancy work, or the training and education of their boys and girls.

The contribution may be upon one subject or composed of short paragraphs on a variety of topics. All MS. must be written on one side of the paper only. All communications for this department must be addressed to the Farmhouse Department, care of THE AMERICAN FARMER, Washington, D. C.

Employment for Women.

EDITOR FARMHOUSE: Not long since I read a piteous appeal, written by a widow, who had been left with three children to support. Her request was that someone would tell her how to make a living for herself and little ones. There are thousands of ladies all over our land who are trying to solve that problem. They have not enough education to teach school nor enough money to start a store. They must take care of their little ones, and cannot go away from home to work. Many writers have advised them to raise poultry or small fruit for market, but this would require a small capital to begin with, and their homes may be so situated that either would be impossible.

There is one business that I have never seen mentioned in all the printed advice to women, and that is the one of renovating and dyeing clothing. The work is light; almost any woman will like it after she understands it, and it is very easy to learn. Many young men away from home would pay a good price to have their suits cleaned and pressed. A mixture that is effectual in cleaning all kinds of woolen goods is made by mixing a pint of alcohol with half a pint of ammonia; rub the soiled part vigorously with a sponge or woolen cloth. A cheaper preparation, and one used by many tailors and cleaners in renovating men's clothing, is made as follows:

Buy five cents worth of soap bark chips at the drugstore, pour a quart of boiling water over them, and boil gently two hours. Strain through cheese cloth and use it cold. Thoroughly sponge the article to be cleaned, rinse in clear water, dry, and press. The goods, whether cotton, wool, or silk, will come out clean, unfaded, and soft as when new.

To remove grease spots and clean coat collars, I prefer benzine to anything else. Place a cotton or woolen cloth or a piece of blotting paper under the soiled part, then rub benzine on the spots until the grease and dirt disappears. Be sure to place a cloth under the garment to be operated upon, otherwise a circular stain will remain. The cloth or paper absorbs the grease when the benzine drives it through. After the spot is removed, continue to rub with a dry cloth until the benzine is evaporated. If there are spots of paint to be removed, saturate with turpentine, let it remain three or four hours, then rub between the hands; it will crumble away without injury to the texture or color of the cloth. Missing buttons may be replaced and rents neatly darned.

There are very few families that have not some articles, such as dresses, cloaks, shawls, etc., that could be used for a long while if their freshness and beauty were restored by dyeing them. The hard times instead of lessening the amount of work would increase it, for ladies will wish to economize by making garments over. During our grandmother's time dyeing was a tedious process and an art that required a great deal of study to acquire. But now Diamond Dyes do the work perfectly, producing fast and beautiful colors, and all the study that is necessary is to read the directions.

If a dress is to be dyed, take it apart, as this will make the work of pressing easier. All goods should be perfectly clean. Grease, tar, and many other stains may be removed by washing in a warm suds made of soft water and some good soap or washing powder. This will thoroughly cleanse without injury to the fabric. Stir the goods constantly while in the dye to keep it from being spotted, and press on the wrong side. Articles that cannot well be taken apart can be dyed as they are, and if necessary to press them on the right side put a wet cloth over the goods before ironing. If the goods is silk or wool, use Diamond Dye for wool; if they are cotton, or cotton and wool mixed, use the dyes for cotton.

The usual price for dyeing a dress is from $1 to $3. It will take one or two packages of dye (the amount varies with the weight of the goods and the shade desired), and not more than two hours will be required to do the work, so you can readily see that it pays.

About a year ago I advised a lady to try this business. Her entire capital was $5, and she has made a good living for herself and four children ever since. Her business has increased so much that she finds it necessary to hire an assistant, and her work gives entire satisfaction, although she had no experience before she began.—MARY.

A Friendly Chat.

EDITOR FARMHOUSE: I have seen but a few numbers of THE AMERICAN FARMER, but I like it so much I thought I would like to be a subscriber. I am writing this while resting after a hard day's work. This is a busy time in Missouri both for the farmer and his wife. I have been "bagging grapes." Of course, you all know what that is. I put on about 600 bags, and I expect to have some very fine grapes this Fall for my trouble. Wish some of the city sisters could enjoy my lovely country home. I have lived in a good many places in my short life, but this beats them all for health. I never lived on a farm until after my marriage; but oh, what a delightful change; I do not think I shall pine for city life again.

I have one son; I am trying to raise him so he will be an honor to God and a joy to his parents. It makes my heart sick to see how some children are being brought up.

I wish some of the farmers' wives and daughters would let us know how they make their pin money. I raise turkeys for mine, and find it pays well. I have tried both the Bronze and the White Holland. After a thorough trial of both I find the White Holland suits me best. They are not quite as large as the Bronze, but they are a fine bird when dressed.

I would like to tell you of an easy way to make a rug. Make some wooden nitting needles about a yard long, take rags any color and fill one needle with stitches; now knit them off on the other needle. Keep on until you have your rug large enough. Much prettier than braided rugs. I do lots of fancy work. I am now making a silk crazy quilt.

I wonder how many of the busy women sew carpet rags on the machine. Just try it once, and you will be surprised at the amount of rags you can sew in a short time. I lap the end and sew across. Do not cut the thread every time, but keep right on sewing until you have a lot sewed, then clip apart.

Mothers, be sure and teach your daughters how to cook. When I was married, all I could do was to make pie, cake, and puddings. It was almost impossible for me to make a batch of biscuits or to cook vegetables. This was a sore trial. I could do almost everything else well, but how I longed to be a good cook, and after many failures I at last succeeded.—A. E. MOORE.

A Voice from Kansas.

EDITOR FARMHOUSE: For over five years I have lived on the broad, beautiful prairie of western Kansas, and for most of that time we have been blessed with good crops and plenty of garden vegetables of all kinds.

The soil here is very productive, and everything seems to grow with very little trouble to the farmers now. This year there was not enough rainfall for the growing crops. Corn was about one-half crop, wheat was an entire failure, which made work during the Summer very light, as there was no harvest or thrashing to be done.

A great many live in sod houses, but as the country improves, frame and stone houses are erected, pastures fenced, and windmills put up. We have a very good building stone in this vicinity and it is quite plentiful, and beautiful houses can be built of it.

Sod houses are quite comfortable—cool in Summer, as the rays of sunshine cannot penetrate the thick walls, and warm in Winter; but a dugout is warmer than any house I ever lived in. It was my fortune to pass my first Winter in Kansas in a dugout. The cold storm might sweep unbroken over the prairie, but within everything would be as warm and cosy as could be. I often look back with pleasure to the Winter spent in the old dugout as one of the happiest of my life.

For the first year or two our fuel was mixed with grassoline or buffalo chips, as that was cheap and economical; but now so much corn is shelled that the good housewife has all the cobs she can burn. My first experience in burning buffalo chips was amusing. Every time I put one in the stove I would have to wash my hands, and tried to keep them out of sight so a chance visitor might not see them. But now I have almost forgotten to wash my hands or cover them up. Such is life on the great plains; all is not shadow nor is it all sunshine.—TRIXIE, Almenia, Kan.

The Pacific Slope.

EDITOR FARMHOUSE: Having been married nine years and lived on a farm all my life, I thought I would give your readers a little of my experience.

First, a short sketch of the country in which I live. I have lived here 23 years. This is what is known as eastern Oregon, being divided from the west, or the Williamette Valley, by the Cascade range of mountains.

We live 60 miles from the railroad, also 60 miles south of the Columbia River. It is a very narrow, mountainous country, with very changeable climate—very warm (110°) in Summer and cold in Winter, averaging 20 to 30° below zero.

Next, let us begin with the staff of life, i. e., bread, and as I have received a number of compliments, I will give my way.

I make what is called potato yeast. Take three large potatoes, grate, then add one rounded bake spoonful of salt and one and one-half of sugar; mix until they dissolve, then add boiling water, slowly stirring constantly until they are of a clear color and thick like starch. Set by to cool. When milk warm add a teacupful of other yeast, say, what is left over from the last making. Set in a warm place until it gets light, which will be about half an hour, then keep in a cool place. Keep in glass or stone jars.

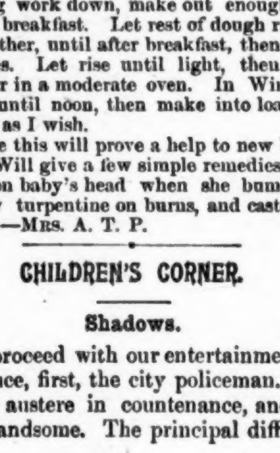
Then to make bread I sift flour in pan and use one teacupful of yeast to two quarts of flour, and add two tablespoonfuls of shortning (I prefer meat fryings); then add warm water and make a dough real stiff, knead well, or until it has a tough, gluey feeling. A little practice and your bread will be very light and nice. I make by guess, just to suit my fancy. I mix my bread after supper, let rise over night, in the morning work down, make out enough biscuit for breakfast. Let rest of dough rise, in hot weather, until after breakfast, then make in loaves. Let rise until light, then bake one hour in a moderate oven. In Winter I let rise until noon, then make into loaves or biscuit, as I wish.

I hope this will prove a help to new beginners. Will give a few simple remedies: Try butter on baby's head when she bumps it. Also try turpentine on burns, and castor oil on cuts.—MRS. A. T. P.

CHILDREN'S CORNER.

Shadows.

To proceed with our entertainment we introduce, first, the city policeman. He is very austere in countenance, and not very handsome. The principal difficulty



in throwing this shadow is in securing the correct position of the middle finger of the right hand, which represents the mustache. The helmet is made by the left hand.

Then there is an ox, that every farmer's child ought to know by sight.

This shadow gives a little trouble. The right hand is used for the muzzle, while the upper part of the head and the horns are made by the left hand.

Then, there is Polly, the chattering parrot, that may be represented as saying many funny things. It is a very simple matter to produce this shadow. The beak may be a little troublesome at first, but is the only part that will require a second trial.

The pole upon which the bird is perched is made by stretching horizontally the index finger of the right hand.

A Doll's Hammock.

While Mamma is thinking and talking so much about Christmas presents, there is a pair of little hands that would like to be useful, too. The air is full of secrets, and here is one for her to keep for herself from the little girl that sits with her in school.

This doll's hammock is very useful and almost necessary where there is a large family of dolls.

It is made from a piece of bed ticking that Mamma had left last Spring. The worsteds are some red yarn that Grandma donated, and the silk is some that was in Mamma's work basket that she did not care for.

This is the way to make it: Cut two oblong pieces of the ticking as long as necessary for the size of the doll and half as wide as they are long.

Lay the wool smooth and straight along the white stripes and fasten it down with slanting stitches of embroidery silk.

When all the white stripes have thus been covered, lay the two oblongs together, wrong side out, and stitch across the ends. Turn the right side out and stitch again, thus making a sort of hem or shirr wide enough to run in a piece of whalebone or heavy bonnet wire.

Turn in the edges of the sides. Baste together smoothly.

Then with the worsted make a fringe along these two double edges. This is done by threading a needle double, and pulling the worsted through the ticking, leaving the loops as long as you wish the fringe to be, say, about two inches, though some dolls like to have their hammock fringe three inches deep.

Take another stitch—a sort of buttonhole stitch—in the same place, to secure the worsted; then set a fresh stitch, as before, next to the first one, fastening it in the same way; this leaves the worsted in a succession of loops.

When this has been done along both edges of the hammock, the loops must be cut. The fringe is then complete.

In the hems run pieces of wire or whalebone, not as wide as the cloth, which is thereby left somewhat shirred or gathered. Fasten the ends of the bones stoutly to the ticking.

Now thread red cord into a big needle and sew it in single all along the ends, one inch apart, passing the needle inside the "stretcher" of wire or bone. Cut it off at each stitch, leaving the two ends six or seven inches long. Gather up the cords of each end and tie them into a brass ring.

Now the hammock is complete. A couple of hooks in a corner of the playroom will suffice to hang it on, or a cord fastened to each ring will enable you to swing your doll hammock between two chairs, or to a low branch of a tree in the Summer time.

If you wish to have the hammock very, very complete, make a gay little pillow of silk, stuffed with cotton, and tie it in at one end.

A Well-Dressed Foot.

A great source of suffering is found in an illy dressed foot. It would almost seem that the shoe manufacturer and the chiropodist were in collusion. The French women are famed for their pretty feet. They bestow great care upon them, as well as much thought in the selection of shoes. They are very rational in dressing them. They do not try to wear a shoe that was not fitted to them, any more than they would a dress. Neither do they think one kind of a shoe is suitable for all kinds of wear. For walking they wear a low-heeled, broad-toed shoe that is fully a size too long for the foot, as a high-heeled shoe throws the weight on the front part of the foot and broadens it; the short shoe bends the great toe in and causes that most painful of all things, a bunion, to say nothing of the numerous little calouses that will slowly but surely put in an appearance. Short shoes, lasted tightly over the toes, are also the cause of ingrowing toe nails.

Hardly a person over 20 years of age who has worn shop-made shoes is free from some trouble or other of the feet. A little patient care will do much to relieve this trouble. A corn may be cured by brisk rubbing in vaseline morning and night and protecting it from the shoe by cutting a round hole in a heavy piece of chamois skin. Do not think you have given this remedy a fair trial when you have applied the vaseline a few times, and then forget to put on the chamois the third morning. Paint a bunion with tincture of iodine as long as you can without its becoming sore, then apply vaseline until the skin is no longer tender, and then turn to iodine again. Some who are extremely heroic have a little board made to which they bind the foot to try and draw the great toe back, so that the outside line of it will be straight again.

For an in-growing nail, allow the corner which troubles you to grow very long, but keep the other part of the nail paired very closely. Gently raise with the point of a knife the ingrowing corner, and place under it a little cotton wet in vaseline. Change this cotton very frequently, each time putting in a piece a trifle larger. This treatment tends to widen out the groove in the flesh made by the nail. When the nail has grown as long as it is possible to allow it, remove all of the cotton, pour in the place a drop of laudnum, and then cut out a three-cornered piece of the nail. This will of course hurt a little, but only for a moment. You must use your judgment as to the size of the piece to be removed. The line marking the edge of the nail from the flesh should be straight from the center of the nail up. After the operation is performed, bathe the toe, then wrap in a cloth till it has stopped bleeding, then press the flesh as tightly as comfortable to the nail, and again bind up in cotton and vaseline and leave on this bandage for two days. All this should be done some day when you have the time to follow with a long rest. If possible, wear all this time a comfortable pair of large, low-heeled shoes. After they have been treated a few weeks, give your order to a good shoemaker for a sensible pair of working shoes, with broad toes, low heels, long, that are tight only at the ankle and about the heel and over the instep, so that your foot will not work up and down as you walk. Too many women neglect their feet till they become incurable, and as a result the owners "hobble" the remainder of their lives. Do not let any shoe dealer sell you a pair of shoes that you are not sure will be comfortable. No woman can be happy when her feet are paining her. Men do not suffer as much as women, as fashion does not tell them to cripple around on the end of their toes; then, too, men have a way of keeping their feet up on stools a great deal while resting, which does much to relieve the pressure upon the arteries of the lower limbs.

The Open Fire.

We note with satisfaction the increasing frequency with which the open fire is making its appearance. If pleasure is to be considered there is no wiser investment a person can make than to add a fireplace to a house. No month of the year rolls past without the need of a fire to dry if not heat our living rooms.

There is nothing so conducive to pleasant conversation as a glowing fire. The children love it, and the men are fond of sitting near so as to give the necessary poke just in the nick of time. The same woman that complains that her husband leaves his newspapers about says that it makes too much dirt. When the ashes are swept up in the morning the fire may be laid for the next time. The children may be taught to keep the wood supply on hand, so that the fire may be built for them at night to roast nuts and apples; this can be easily managed if the matter is presented in the right light.

Hickory is the brightest and the most crackling of fires, and if the children have become sufficiently interested to lay in a supply of fir cones, it will be possible by adding a few of these to have a fragrant fire as well.

Then let all the family, from Grandma down, join the circle and listen to the story teller.

For the Home Table.

VINEGAR PIE.

One and a half cups of sugar, rubbed with two heaping tablespoons flour, one-half nutmeg, one heaping teaspoon butter, one-half cup vinegar. Stir well. Then add boiling water to make a quart. Boil until it jellies, and bake with under crust.

CORN STARCH CRACKERS.

One and a half pints flour, half pint corn starch, half teaspoon salt, one tablespoon sugar, one tablespoon lard, one teaspoon baking powder. Sift all dry ingredients, and rub in lard, then add half pint milk, and mix into a firm dough. Set under a cloth for 10 minutes, then roll exceedingly thin, prick with a fork and bake, first washing them over with milk to glaze them.

Graham crackers are made the same as corn starch crackers, substituting Graham flour for corn starch. Also corn meal crackers.

MOCK MINCE PIE.

One cup bread crumbs, one cup molasses, one cup sugar, one cup vinegar, one cup water, half cup butter, raisins and spices to taste. This makes three pies.—MRS. K. E. S.

DELICIOUS ORANGE CAKE.

Rub thoroughly to a cream two cups of sugar and two-thirds of a cup of butter, adding three eggs beaten separately. Squeeze the juice of two large oranges into a cup, adding enough water to fill it. Stir this into the mixture, together with three and a half cups of flour, two even teaspoonfuls of cream-of-tartar, one of soda, and a little of the orange rind, grated. Bake in layer tins. For the filling, use one egg, yolk and white. Grate a little of the orange rind into this and the juice of half an orange, adding sugar enough to thicken.—*Ladies' Home Journal.*

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When writing mention this paper.

THE SPUR-WINGED GOOSE.

A Crane-like Goose of Far-away Australia.

THIS SPECIES is related to the semi-palmated goose, which is a large, striking-looking bird, glossy, greenish-black, with the shoulders, rump, breast, and abdomen pure white, and its voice is said to be a loud whistling.

The spur-winged goose, as the name indicates, is provided with a strong spur, and the legs are rather high and placed well under the middle of the body. There are three or four species of the genus, one of which, from eastern Africa, with the high frontal knob, is here illustrated.

Dr. G. Bennett, in a letter to Mr. Gould, speaks of it in the following manner: "The semi-palmated goose I have seen domesticated in Sydney in a poultry yard, having been hatched by a common hen. This bird in its anatomy evidently approaches the cranes, and in habits also. Especially when you see it running about the poultry yard, it resembles one of a crane more than a goose. The black and white plumage imparts to the bird a very handsome appearance, as it walks with a stately tread (not with the waddling gait of the goose) about the yard of my house, like one of the waders. They are easily tamed, and very amicable to the other poultry, but require company in order to thrive. The flesh, however, is coarse and not well-flavored. It inhabits the southern, south-eastern, and northern Australia, but seems to have been driven away from the southern parts by the progress of cultivation. At Dr. Leichardt's time they were so numerous and the flocks so dense in the north that the natives were enabled to procure numbers by spearing them when flying."

The knobless variety, which inhabits the western and southern parts, Mr. F. Ayres says, "is rated as the commonest of the wild geese. The flesh of this species is by no means good eating, as the flesh is coarse and tasteless, and the young birds have scarcely any meat on them. Sometimes they are very shy and at others almost absurdly tame; as a rule, it requires heavy shot to kill them. They come out early in the morning from the swamps and reeds to feed on grass seeds, and are often seen on the farmers' corn lands. If stalked in the long grass, they will invariably creep away, instead of taking wing, as they run at a good pace,

THE SPUR-WINGED GOOSE.

and by the time he is on the spot expecting them to rise, he sometimes sees the head of one a couple of hundred yards off examining the situation. If the shooter squats when the birds are flying, they will often come and have a look at him, and this curiosity costs them their lives. As a rule, they are gregarious, but are sometimes seen singly, and at others in pairs; they breed away from the water in thick, grassy, or rushy spots, and lay a number of white eggs with thick, glossy shells."

The Egg Breeds.

EDITOR AMERICAN FARMER: Of course, hens of all breeds lay more or less eggs; that is their only way to propagate the species. But some breeds have been mated and fed so long with the single view of large egg production that it would be natural to expect them to become by this time better layers than other breeds that have been selected and bred for the production of prime, large carcasses for the market. The general all-purpose is a legendary myth, and, like the once lauded all-purpose cow, will never be produced by man. Man, himself endowed with reason as he is, cannot excel in his chosen calling unless he gives it his undivided attention, and animals are no more superior to him in this than in other respects.

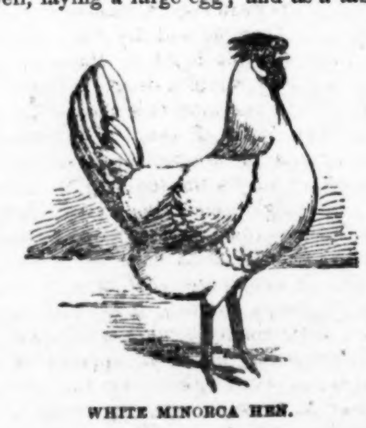
The silver egg breeds are the egg breeds, all of our celebrated laying breeds producing eggs with a white shell. This is the rule, and I do not know of a single exception to it. When you find a hen, pure bred, that lays a white egg you may select her for a good layer. The principal laying breeds are the Leghorns, Minorcas, Houdans, Hamburgs, and Polish. The Belgians have a breed, the Campines, that are said to eclipse anything that we possess in the line of layers; but as we are informed that they are only a single comb variety of the Hamburg family, I believe their record has been slightly overdrawn.

WHITE FACED BLACK SPANISH HEN.

Of the Leghorns, it is not necessary to say anything, as all the world knows what they are; that as layers, the Leghorn hen has not an equal. They are a hardy fowl, grow rapidly, and mature at an early age. It is not uncommon for a Leghorn pullet to commence laying when four months old, while the larger market breeds will require fully two or more months longer before sufficiently matured to lay.

We forgot while enumerating the laying breeds to mention the White Face Black Spanish, one of our oldest and best breeds, although they have of late years been badly injured in vitality and egg production by the whims of the fancier. The breeding of exhibition fowls has much to commend it to all lovers of fowls, but our fanciers at times do the cause more harm than good. The Spanish fowl is a case in point, it has lost popularity with the masses, and is to-day rarely met with except in the yards of the fancier. They are entirely too valuable a breed to be lost to the world of commercial poultry breeders, and I hope to see them again in the ascendant. They lay a very large white egg, and a great many of them being only second to their cousin, the Leghorns. Being black, like all black fowls they dress white, and as it is one of America's fads to purchase only a yellow, golden-skinned fowl, they are not as valuable for a market fowl as they otherwise would be; for aside from the color of the skin they make as good a table fowl as do many breeds more popular. They are rather tender when young, requiring great care to rear, but they're worth all the care you have to give them.

The Houdan is the favorite French breed, both for eggs and market fowls, but they do not appear to be exactly adapted to our climate, being rather tender with us, while in France, their native home, they are hardy as anyone. In such a diversified climate as we possess, there must be some place exactly suited to the wants of the Houdans, and where they can be bred in large numbers with profit to their breeder. They lay well, laying a large egg; and as a table



WHITE MINORCA HEN.

fowl, you would have to make a long search for a fowl that is superior to a well fed and well cooked Houdan. Their flesh is solid, fine grained, and of exquisite flavor; their extreme tenderness is all that has kept them from becoming popular here with us.

Another good breed is the Minorcas. They claim England for their home, and are among the best of layers, and being hardy and of good size they rapidly gained public favor with us, and they have proved when given a thorough test

SILVER-SPANGLED HAMBURG HEN.

to be worthy of our warmest regard. The only fault anyone can reasonably find with them is their large, beefy combs. It necessitates housing them more warmly than other breeds in cold weather to protect the comb from frost. A frosted comb ruins a fowl for exhibition, and until perfectly well the hen with a frosted comb will lay no eggs. Some escape this by dubbing in early Fall, but I don't approve of that plan, for while it is undoubtedly to a frozen comb the dubbing and subsequent cure entails much suffering upon the fowls, better provide a frost proof house for them.

The Polish and Hamburgs are great layers, but their eggs are too small for sale, not selling well if the market is liberally supplied. Where one has but limited room and wishes eggs for home consumption a few Hamburg hens will answer your purpose well. The Polish is entirely too tender for the average poultryman, and they and the Hamburgs show to the best advantage when confined exclusively to the yards of the fancier.—TRIXIE.

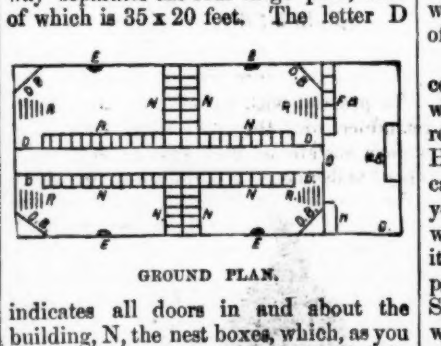
Farm Poultry Buildings.

There are many buildings that can be made suitable for keeping a flock of good laying hens, yet farmers sometimes

PERSPECTIVE VIEW OF POULTRY HOUSE.

prefer to see a plan or two, in order that a proper selection as regards arrangement and taste be afforded when they contemplate building a house for the flock. A house that is roomy and comfortable in Winter weather should be just as comfortable for Summer occupancy. They do not require so much shelter then as in Winter; very often they prefer to roost outside on trees or fences where freedom from bad odor, often found in poultry buildings, is avoided, and they are none the worse for it, becoming hardier and more able oftentimes to withstand the Winter when it comes. Many farmers throughout the Northern States give very little care to their fowls in warm weather; they seem to do well, costing comparatively nothing to feed them, they all being profitable to the owner.

Our illustration, Fig. 1, shows a view of a very cosy laying house to accommodate from 100 to 200 laying hens. It is built plainly, consequently cheap, affording, however, as comfortable quarters as houses showing more elaboration in exterior finish. It is 90 feet long, 44 feet wide and 15 feet high. This is a good size and suitable for a flock of layers, yet you may change the proportions to suit your own ideas to accommodate just the number of fowls you desire to keep about your place. The ground plan, Fig. 2, shows the interior arrangement. A hallway separates the four large pens, each of which is 35 x 20 feet. The letter D



GROUND PLAN.

indicates all doors in and about the building, N, the nest boxes, which, as you will notice, has been amply supplied in each pen, so that hens may have no excuse for not paying for her boarding. The nests are fastened in sets of three by hooks, and can be removed quickly and cleaned without the trouble of having to knock out nails, split the boards, perhaps, or put a pet on one or more of your fingers before the task is accomplished. R, the roosts, each pen being amply supplied with low, comfortable poles. D B, the dust box, each pen being supplied with one of ample proportions to admit of the hens taking a bath as often as they choose. F B is the feed bins, where grain is kept; it is in the main room where the work of preparing each feed is done. A heater, H, does the work of cooking as well as heating the building. A work bench, W B, affords an opportunity of doing repairing such as is very often necessary about a poultry building. This main room is, or should be, connected with all poultry houses, for its convenience to the person who looks after the flock. In cold weather a room to work and tinker in is always appreciated when time hangs heavy and days are cold and disagreeable.—J. W. CAUGHEY, Pittsburg, Pa.

Superstitions About Corn.

Writers who believe the plant indigenous to America appear to think that it originated in the Valley of the Amazon, and was thence disseminated throughout the continent, but the Dakotas and Ojibways did not trouble themselves with such scientific trifles. It was much easier and also more consistent with a certain mysticism inherent in the Indian character to find the desired explanation in a legend, and this legend, given by Schoolcraft, has been charmingly interpreted by Lonfellow in his "Hiawatha." Hiawatha is represented by the poet as a public benefactor, who, having remarked that his race led a precarious existence, nourished by the birds and animals killed in the forest, the wild berries that furnished a scanty crop during a brief season, and the fish of the lakes and rivers, all of which sources of supply were insufficient and uncertain, passed seven days and nights in prayer and fasting, hoping that some surer and more substantial nutriment for his people would be revealed to him. The revelation came to him in the shape of a beautiful youth, clad in green and yellow and having his head adorned with green plumes and yellow hair. This youth was no other than Mondamin, or Maize, giving himself as a precious boon to the red man. Hiawatha wrestled with him several times, overthrew him and buried the body as Mondamin himself had directed, covering it in the earth with his green and yellow garments and green plumes. In due time there was a resurrection of Mondamin in the form of loaded stalks of corn. Hiawatha gathered the ripened ears, stripped the withered husks from them, as he had stripped the garments from Mondamin, and gave a feast to the people, to whom he announced, in the form of an after-dinner speech, the new gift of the Great Spirit.

The Puritans inherited various superstitions regarding maize, from the Indians, among others that attributing to the maiden who found the red ear at the husking a handsome husband at no distant date. Another of more delicate nature did not meet with equal favor. It was called the blessing of the cornfield, and was accomplished by a young wife, "clothed on with chastity," like Godiva, walking at the dead of night around the newly planted corn. A magic circle was thus drawn, which could not be crossed by the ravens or any other agency hostile to the young plant or the ripening harvest.

The Spanish Bull.

The bulls used for fighting purposes are a specially selected, specially cared for class. They are all pedigreed. Andalusia is especially the district of the bull. Here, at the age of one year, the young bulls are separated from the heifers, branded with the owner's mark, and turned out loose on the plains to graze with others of their own age.

When a year older, the young bulls are gathered together, in order that their mettle and fighting qualities may be tested. One of them is separated from the herd, and chased by a man on horseback, who, by the skilful use of a blunted lance, overthrows the escaping bull, whereupon another rider comes in front of the animal with a sharper lance, to withstand the expected attack. If the bull, on regaining his feet, attacks the rider twice, it is passed as a fighting animal; but if he turns tail and runs off, then it is set aside to be killed or to be used in agricultural work. And so with each animal, until the whole herd of two-year-olds have been tested.

Each bull that has stood the test successfully is then entered in the herd book, with a description of its appearance, and receives a name—such as Espartero, Hamenco, and the like. This process of careful selection goes on from year to year until the bull is five years old, when, should its mettle still prove true, it is ready for the arena, and flaming posters appear on the walls of Madrid or Seville announcing that Espartero (or whatever his name is) will on such and such a date make its first and final appearance.

A good "warrantable" five year old bull for the fighting rings costs from $350 to $400.

Medals for the Reliable.

The Reliable Incubator & Brooder Co. of Quincy, Ill., have been awarded highest honors, medal, and diploma on their incubator and brooder combined, and a medal for hot water brooder. This is a very gratifying award, as there were exhibited a large number of incubators. Singularly enough, however, the Reliable was the only incubator from the incubator city of Quincy that competed for the prize. We congratulate them on their success.

A recent writer asks whether ants talk, and relates that he saw droves of small black ants moving apparently to new quarters. Every time they met they put their heads together as though they were chatting. To investigate the matter he killed one, and the eye-witnesses of the murder hastened away and laid their heads together with every ant they met. The latter immediately turned back and fled.

We propose to give away 100,000 watches as fast as our friends want them

THE MARKETS

Review of the Fortnight.

So far this year India has shipped 15,470,000 bushels of wheat to the European market.

Last week England received 172,000 quarters of wheat, against 219,000 quarters the previous week. The imports of maize increased from 92,000 quarters to 94,000.

Clapp & Co's. circular (60 Broadway, New York,) says:

"England's flour market is depressed by burdensome supplies from the United States. Russia and India have been shipping freely of late. All these causes seemed to have culminated to the benefit of the bears last Monday, then producing the lowest price on record the world over. Sentiment has changed somewhat in consequence of leading bulls having bought liberally and freely, proclaiming their belief that the worst is past. That 60 cent December wheat offsets all the bear features, and that 10 cent advance should be as easily secured as the last 10 cent decline was made. That May wheat in Chicago at 70 cents is far below cost of production. That all it requires to advance it, is a change in the speculative opinion. Money is plenty and cheap and will cause the change, if holders show courage, nerve, and only a little patience. Liquidation is about over, and will not occur again for about five months, during which time Australia and India will cut their wheat. Russia and ports of the United States may come to some good opinions about what the next crop will "pan out."

Holland, Spain, Sweden, Italy, Belgium, Germany, and France imported nearly 50 per cent. more wheat last August and September than same time the year previous.

California is shipping barley to China and Europe on a large scale.

Wool.

BOSTON, Nov. 28.—Receipts of wool for the past week, 7,496 bales domestic and 1,215 bales foreign. Sales, 3,545,100 pounds domestic and 192,000 pounds foreign. Market quotations: Domestic wools—Ohio and Pennsylvania XXX, 26; XX and above, 24a25; X, 22a23; No. 1, 25; No. 2, 23a24; fine unwashed, 15a16; unmerchantable, 17a18. Ohio combing, No. 1, ⅜ and ¼ blood, 26a27; No. 2, ¼ blood, 24; Ohio delaine, 25. Michigan, X, and above, 20a21; No. 1, 23a24; No. 2, 23a24; fine unwashed, 14a15; unmerchantable, 15a17. Michigan combing, No. 1, ⅜ and ¼ blood, 25; No. 2, ¼ blood, 23a24; Michigan delaine, 23a24. Kentucky, Indiana, and Missouri combing, ⅜ blood, 20a21; combing, ¼ blood, 18a19; combing, braid, 16a17; clothing, ⅜ blood, 19a20; clothing, ¼ blood, 18a19; clothing, coarse, 17; Texas (scoured basis), Spring, fine, 12 months, 38a40; Spring, fine, 6 to 8 months, 35a37; Spring, medium, 12 months, 33; Spring, medium, 6 to 8 months, 32; Fall fine, 28a30; Fall medium, 25; California (scoured basis), Spring, Northern, free, 12 months, 38a40; Spring, Northern, free, 6 to 8 months, 35a37; Southern, 12 months, 37; 6 to 8 months, 33a35; Fall, free, 30; defective, 25a28. Oregon (scoured basis), Eastern No. 1, 35a36; No. 2, 33; Valley No. 1, 34; No. 2, 32. Territory staple, (scoured basis), fine, 38a40; fine medium, 36a38; medium, 32a33; Territory, ordinary (scoured basis), fine, 36a37; fine medium, 34a35; medium, 30a32. Colorado and New Mexico, improved, 12a12½; coarse and carpet, 11. Georgia and Southern, 17a18. Pulled wools (scoured basis), fine A, 38a43; A supers, 32a35; B supers, 28a30; C supers, 23a24; fine combing, 35; combing, 30a33. California, finest, 40a42; do second, 37a40; Western extra, 32a37; super, 25a30; low, 10a15. Foreign wools—clothing and combing: Australian, Port Philip combing, 33a36; clothing, 32a33; Adelaide combing, 30a32; New Zealand clothing, 30; fine crossbred, 36a37; Cape clothing, 27a28; combing, 29a30; English and Irish, Down No. 2's, 37; Irish hogs, 37a39. Shropshire hogs, 36a38; tegs, 38; Sussex, 40; Montevideo, 27a28; combing, 31a32.

Carpet, etc., Aleppo, 12½a13½; Angora 14a14½; Bagdad, black, 19a20; fawn, 22; white, 23a24; Bokhara, colors, 13a14; white, 18a19; camel's hair, 13a13½; China No. 1, 17½a18; Cordova, 16a16½; Donskoi Autumn, 19; combing, 25; gray and yellow, 19a20; lambs, 19; Donskoi, greasy, 12½a13½; East India, choice, 15½; low, 14; Georgian B, O., 18; B., 17; B. S., 15a16; Kandahar, choice, 19a20; tinged, 25; Karada, choice, 19a20; ordinary, 16a17½; Khorassan colors, 15a16½; white, 22; mohair, Turkish, 50a55; Cape, 47a50; Armenian, 25a33½; Mossul, washed, 19a20; unwashed, 15; Salonica, 17; Scotch, 16a17; Valparaiso, 16; Vicaneer and Joria, 31a31½.

Cotton.

NEW YORK, Nov. 28.—Futures closed quiet but steady; sales, 148,300 bales; November, 7.90; December, 7.93; January, 7.95; February, 8.02; March, 8.08; April, 8.15; May, 8.23; June, 8.30; July, 8.36.

Month.	Open.	High.	Low.	Close.
December	7.90	8.00	7.93	7.96a7.95
January	7.78	8.02	7.94	7.95a7.96
February	8.05	8.09	8.01	8.02a8.03
March	8.12	8.16	8.07	8.08a8.09
April	8.17	8.21	8.15	8.15a8.17
May	8.25	8.30	8.21	8.23a8.24

Grain.

CHICAGO, Nov. 28.—The wheat market was rather of a quiet order to-day. The feeling was easy during a greater portion of the session, firming within the last hour, but the close was a trifle easier. The opening was about ¼ lower than yesterday's close, declined ⅛a¼, advanced ⅛a¼, eased off again, and the close was about ¼ lower for December and ⅛a¼ lower for May. Lower cables and exceedingly heavy Baltic and Indian shipments to the United Kingdom and continent were the depressing influences. At the decline there was some good buying by local bulls, and the advance noted was the result. Paris advices toward the close giving an advance of 2 on wheat, influenced this buying to some extent. Receipts in the Northwest do not give much evidence of falling off.

Corn opened at a fractional advance over yesterday's close, but became easy, firming toward the close, which was at about the top prices of the day. The range, however, was narrow, and not a great deal of business was transacted. Cash corn was freely offered, and this had a weakening influence on the May. The better feeling in wheat during the last hour effected an improvement in corn. Opening trades were at fraction above yesterday's last prices, eased off ⅛, recovered and advanced ⅛a¼, ruled steady, and the close was ⅛a¼ higher than last quotations of Monday.

Oats showed considerable firmness all day. The better feeling was attributed to the fact that parties short of May oats were long of May corn, and were trying to close their "spreads," but found the offerings of May oats light. The market closed ⅛ higher than yesterday at the outside figures for the day.

		Open.	High.	Low.	Close.
Wheat.	December	.62⅝	.62⅝	.62	.62
	May	.69	.69¼	.68¼	.68⅝
Corn	December	.35¼	.....	.....	.35¼
	May	.39⅝	.40	.39½	.40
Oats	December	.28	.28¼	.27⅞	.28⅛
	May	.30¾	.31⅛	.30⅝	.31⅛
Pork	January	12.70	.....	.....	12.87
	May	12.82	12.85	12.57	12.57
Lard	January	7.85	7.87	7.65	7.65
	May	7.77	.....	.....	7.57
Ribs	January	6.72	.....	.....	6.47
	May	6.62	.....	.....	6.55

NEW YORK, Nov. 28.—Wheat—Spot market strong; fair local trade; No. 2 red, store and elevator, 67½; afloat, 67½a67¾; f. o. b., 67½a67¾; ungraded red, 61a67; No. 1 Northern, 72a72½. Options were moderately active, irregular, closing steady at ⅛a¼ below yesterday; trading wholly local switching and scalping; May and December most active. Closing: November, 67⅛; December, 67⅝; January, 68⅝; February, 69⅝; March, 71⅛; May, 73½.

Corn—Spots fairly active, firm; No. 2 44½a44¾ elevator; 45a45½ afloat. Options very dull, unchanged; May and December, most active; November, 44⅛; December, 44⅜; January, 44½; May, 46¼.

Oats—Spots dull, firm; options firm, quiet; November, 34⅛; December, 34⅜; January, 35¼; May, 36¼; No. 2 white, December, 36⅜; spot prices: No. 2, 34½a34¾; No. 2 white, 36⅛; No. 2, Chicago, 35½a35¾; No. 3, 34; No. 3 white, 34½; mixed Western, 34a36; white do., 36a40½; white State, 36a40½.

Produce.

NEW YORK, Nov. 27, 1893.

Beans and Peas—Domestic white beans are coming forward slowly and the stock in store is not large; this leads to a fairly steady holding, though receivers are inclined to sell when opportunity offers, fearing stronger competition with foreign beans, upward of 17,000 bags of which are now in transit. Red kidney are in some accumulation, dull and weak; outside quotation very extreme. Limas quiet and easy. Green peas, slow. Beans, marrow, choice, per bushel, 2.40a2.45; medium, 1.85a1.90; pea, 1.75a1.80; white kidney, 2.10a2.20; red kidney, choice, 2.25a2.35; do fair to good, 2a2.10; black turtle soup, 2.40a2.50; yellow eye, 2a2.10; California lima (60-pound), 1.65a1.75; foreign marrow, 2.20a2.25; do medium, 1.55a1.60; foreign pea, 1.60a1.65; green peas, barrels, 1.17½a1.20; do bags, 1.10a1.15; do Scotch, bags, 1.35a1.40.

Butter—Trade was a little better and the influence of more moderate receipts and slightly firmer Western advices was shown in a steadier feeling on high grade fresh table butter. Marks of Western creamery grading as extras, reached 27½ more often than at the close of last week, but large, well-posted buyers were able to find some fancy lots, at 27. Nearly all grades under extras were plenty, dull, and of rather uncertain value. Some interest was shown in fancy, well-kept June creamery with sales up to 25. State dairy, Fall tubs, remained quiet, but there was fair call for fine firkins, with the feeling quite steady. Imitation creamery and factory in better supply and easy. Creamery, State, 23a26; do Western, extra, 27a27½; do firsts, 25a26; do seconds, 22a24; thirds, 20a21; do June make, extras, 24½a25; do seconds to firsts, 20a23; State dairy, half firkin tubs and pails, extras, 26; do firsts, 24a25; do seconds, 21a23; State dairy, Welsh tubs, selections, 24½a25; do best lines, 23½a24; do seconds, 21a23; dairy tubs, thirds, 19a20; State dairies, firkins and tubs, extra, 25; do firsts, 23a24; do seconds, 21a22; State dairy firkins, extras, 24; do firsts, 22½a23; do seconds, 21a22; Western, imitation creamery, firsts, 22a23; do seconds, 18½a20; do thirds, 17½a18. Western dairy, firsts, 20a22; do seconds, 18a19; do fourths to thirds, 17a17½; Western factory, firkins, June, 18½a19; do tubs, June, 18a19; do fresh, small tubs, firsts, 20a21; do large tubs, firsts, 19a19½; do seconds, 17½a18; do fourths to thirds, 16½a17.

Cheese—The market was quiet from top to bottom. The run of small out-of-town orders was light, local jobbers were not buying to any extent, and exporters showed only very little interest. There was not, however, much change in holders' views, especially regarding fancy stock, which seems to show most strength. Possibly the skims and part skims could be bought a little lower. One of our local houses has just purchased 500 boxes fancy full cream cheese at Bliss at 11; and we have reports of sales in the Watertown district last week embracing 5,000 boxes full cream white, September and October make, at 10¾ mainly. Liverpool cable, 54s. State factory, full cream, large size, September, fancy, 11½a11¾; do October, fancy, 11¼a11½; do choice, 10¾a11; do good to prime, 10¼a10½; do common to fair, 9a10; do small size, fancy, 12¼; do fair to choice, 10½a12; part skims, Chenango and neighboring Counties, small, 7½a9½; do large, choice, 8a8½; good to prime, 6½a7½; do common to fair, 4a6; full skims, 2a3.

Eggs—It was a very dull market again to-day. Fresh receipts were quite liberal. A considerable accumulation has occurred lately, and buyers have but very moderate requirements. Occasional lots of exceptionally fancy fresh gathered still reach 25½a26, but the bulk of the stock is freely offered in range of 24a25. The average grade of fresh gathered is suffering from competition with held eggs, which are over plenty and rather urgently offered. State and Pennsylvania fresh gathered, per dozen, 25a27; Western fresh gathered, extra, 25½a26; Western, fresh gathered, firsts, 24a25; Canadian, fresh gathered, firsts, 24a25; ice house, October packed, fine, 23½a24; do August and September, choice, 21a23; do early packed, prime, 20a21. do seconds, per case, 3a5; lime eggs, prime, per dozen, 20a20½.

Fresh Fruits—Apples are quiet and barely steady. Pears very dull. Fresh grapes in liberal supply and quiet at unchanged prices. Fancy grades of cranberries are held firmly and meet a continued fair demand, but there is a good deal of medium grade stock arriving, for which trade is very dull. Florida oranges continue in very heavy supply and unimproved. Apples, King, per barrel, 3.50a4.50; do Spy, 2.50a3.75; do Baldwin, 2.50a3.50; do Greening, 2.50a3.50; do Winter varieties, common, 2a2.25. Pears, Boston, per bushel box, 2a6; do near-by, Winter sorts, per barrel, 2.50a4. Grapes, Western, New York, Catawba, per small basket, 11a13; do Concord, per small basket, 11a13; do per large basket, 18a20; wine grapes, in bulk, as to kind, per pound, 1¼a1½. Cranberries, Cape Cod, usual varieties, as to condition, per barrel, 3a5.75; do fancy, large varieties, per barrel, 5a6.50. Florida oranges, per box, 1a2. Grape fruit, per box, 2a2.75. Lemons, per box, 1a3.50; tangerines, per box, 2.50a3.50; mandarins, per box, 1.75a2.50.

Dried Fruits—No change of importance in evaporated apples; movement light, but quantity of stock arriving is also light and desirable fruit is held steady. Sun-dried apples slow and must grade high to command outside quotations. Peaches still have dull sale. Raspberries weak. Other small fruits unchanged. Apples, evaporated, 1893, fancy, per pound, 11a11½; do choice, 10a10½; do prime, 9½a9¾; do common to fair, 8a9; Southern, sun-dried, 1893, fancy, 5½a6; do choice, 5a5½; common to prime, 4a4½; apples, chopped, 1¼a1½; do cores and skins 1¼a1½. Peaches, Delaware, evaporated, peeled, 16a18; do North Carolina, sun-dried, peeled, 7a9. do California, unpeeled, 8½a10. Raspberries, evaporated, 17½a18. Cherries, 9a10. Huckleberries, 14a14½. Blackberries, 7. Apricots, California, 11a14. Prunes, California, as to size, 6a9.

Hops—Business moves along in a quiet way on the local market, but the quantity of stock going abroad and firmer holding on the part of growers tend to give the position a firm look. New York State, 1893, choice, per pound, 23; do common to prime, 18a22; do 1892, choice, 21a21½; prime, 20a20½; common to good, 18a19½; Pacific Coast, 1893, 18a22; do 1892, choice, 21; common to prime, 18a20; old olds, 6a12.

Hay and Straw—Supply liberal, demand rather quiet, and prices unchanged. Hay, per 100 pounds, 85a90; do No. 3 to No. 1, 60a80; shipping, 55; do clover, mixed, 50a60; rye straw, No. 2 to No. 1, per 100 pounds, 50a60; do short, per 100 pounds, 40a45; oat straw, 40a45.

Poultry—Alive—Twelve carloads came in today; only a small part was of prime quality, suitable for the Thanksgiving trade, and this was held a little firmer, but for light, common stock the market was slow and unimproved. Spring chickens, local, per pound, 7a8; do Western, per pound, 7a7½; fowls, local, per pound, 8a9; do Western, 8a8½; old roosters, 5a5½; turkeys, 9a10½; ducks, local, per pair, 60a90; do Western, 55a80; geese, Western, per pair, 1.25a1.62; pigeons, per pair, 20a30.

Dressed—The receipts of dressed poultry are very heavy. The Thanksgiving demand has so far been very good, but the supply is so heavy that receivers are free sellers, and prices are not much better than at the close of last week. Most of the supply is of turkeys, and the general quality is below fancy. A few of the fine near-by goods and occasional lots of extra fancy Western have been worked off at 13a14, but the quantity good enough to bring those prices is very small. Average prime lines of Western are selling mainly at 12a12½, and for any important business 13 is top for the best. Many lots of ordinary quality are going at 11a11½. Chickens about steady. Fine ducks are scarce and firm, and fancy geese sell very well, but medium and common grades of both are very dull. We quote for ice-packed turkeys, dry picked, per pound, 11a12; do scalded, prime, 10a11; do inferior, 7a9. Chickens, Western, dry picked, 8a9; do Western, scalded, 8a8½; fowls, Western, dry picked, 8a8½; do scalded, 8; old cocks, 6a6½. Ducks, Western, 7a11. Geese, Western, mixed, young and old, 6a8; We quote for dry packed: Turkeys, Western, 11a13; do State, Pennsylvania, and Ohio, express, 12a13; do Maryland, fancy, 12a14. Chickens, Philadelphia, 11a14; do Jersey, 10a12; chickens, State and Pennsylvania, 9a10; chickens, Western, 8a10; fowls, Jersey, 10a11; fowls, State and Pennsylvania, 9a10; fowls, Western, 8a9. Ducks, Long Island, 14a15; do Eastern, 13a14; do Jersey, 12a14; ducks, Western, 9a13. Geese, Maryland, per pound, 11a13; do Western, per pound, 7a11.

Potatoes and Vegetables—Domestic potatoes in moderate receipt; trade quiet, but choice grades fairly firm. Foreign stock cleaning up pretty closely, and some prospect of a slight advance on the arrival of stock now in transit. Sweet potatoes quiet and unimproved, but fancy, near-by stock less plenty. Onions quiet and unchanged. Cauliflowers in light supply and steady. Southern string beans scarce, and fancy lots bring high prices, but ordinary qualities are dull sale. Potatoes, Long Island, per barrel, 2.12a2.37; do State, per 180 pounds, 1.25a2; do Jersey, per 180 pounds, 1.50a1.87; do Scotch Magnum, per bag, 1.75a1.85; sweet potatoes, Virginia, per barrel, 1a1.37; do Vineland, choice to fancy, per barrel, 2.50a3; do other Jersey, per barrel, 1.75a2.50.

Onions—Chester, red, per barrel, 1.25a1.50; do yellow, per barrel, 1.25a1.50; do Eastern, white, 2.50a3.50; do Eastern, red, 1.50a1.75; do Eastern, yellow, per barrel, 1.50a1.75; do State, and Western, yellow, 1.37a1.50. Cabbages, New Jersey and Long Island, per 100, 2a5; do State, per 100 2a3.50. Cauliflowers, per barrel, 1a2. Squash, Hubbard, per barrel, 1.25; do marrow, per barrel, 1. Turnips, Canadian, Russia, per barrel, 70a75; do Long Island and Jersey, 75a1. Celery, Long Island, per dozen bunches, 1.25a1.50; do Western, extra large and sound, dozen roots, 40a50; do State and Western, poor to good, per dozen roots, 20a30. Beans, Charleston, per bushel basket, 1a3; do Florida, per crate, 2a3. Parsnips, per barrel, 1a1.25. Carrots, washed, per barrel, 1. Lettuce, Long Island and Jersey, per barrel, 2a4.

The largest known species of night-flying insects is the Atlas moth, a resident of the American tropics, which has a wing spread of over a foot.

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Furnished Singly at Prices Given Under Each Piece.

No. 40. Combination Anvil and Vise; hardened face; finely polished; weight, 50 lbs. Price $6.
No. 41. Farmer's Forge. Style 5 B. Will heat 1¼ inch iron. Price $5.
No. 42. Blacksmith's Cold Chisel; 1¼ lbs.; solid cast steel. Price 45c.
No. 43. Blacksmith's Hot Chisel; 1¼ lbs.; solid cast steel. Price 45c.
No. 44. Blacksmith's Tongs; wrought iron; 18 inches. Price 45c.
No. 45. Screw Plate; 3 taps; 3 set dies, cut ¼, ⅜, and ½ inch. Price $4.
No. 46. Blacksmith's Hammer and Handle; weight, 2 lbs. Price 80c.
No. 47. Adz Eye Shoeing Hammer and Handle; weight, 9 oz. Price 45c.
No. 48. Farrier's Knife; Wostenholm. Price 45c.
No. 49. Blacksmith's Drill Press; hand feed; weight, 50 lbs. Price $8.
No. 50. Farrier's Pincers; cast steel; 12 inch. Price 85c.

Our vise is solid and strong; face, 4 x 9 inches; jaws, 3 inches wide, and open 4 inches. Our drill is not a cheap bench drill, but a genuine blacksmith's post drill, with adjustable table. Drills ½ inch hole to the center of a 17 inch circle. Compare it with other drills offered with kits of tools. Our forge is built especially for our kit; 15 inches high to top of bowl; bowl, 14 inches in diameter; fan, 8 inches in diameter; weight, 45 pounds. We guarantee it the lightest running, strongest blast, and the best forge made for the purpose. Every tool on the list the best the market affords, and so guaranteed.

Shipping weight complete, 150 pounds.

We warrant every tool the best made, and the kit complete the best and cheapest on the market. Satisfaction guaranteed. Please notice that hammers and chisels are solid steel (not steel faced). Pincers have solid steel jaws. Tongs are hand-made wrought-iron. Our drill is a splendid blacksmith's drill, solid and substantial, and equal to any test. Anvil and vise carefully made and superior to any of same size. Farrier's knife best Wostenholm blade. Absolutely the best kit ever gotten together. Freight rate is very low on the above.

The above outfit, complete, boxed, ready for shipment, only.......$20.00
Or with THE AMERICAN FARMER one year and the outfit complete.......$20.25
Purchaser to pay freight.

WANTED—By H. H. Vise, Varner, Ripley Co., Mo., the address of some person having for sale the right on a patent bee hive.
When writing mention this paper.

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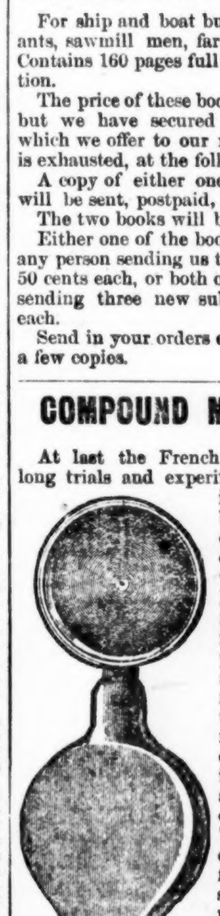


THE FENCE CORNER.

The Editor's Mistake.

The editor of a weekly journal lately lost two of his subscribers through accidentally departing from the beaten track in his answers to correspondents. Two of his subscribers wrote to ask him his remedy for their respective troubles.

No. 1, a happy father of twins, wrote to inquire the best way to get them safely over their teething.

No. 2 wanted to know how to protect his orchards from the myriads of grasshoppers.

The editor framed his answer upon the orthodox lines, but, unfortunately, transposed their two names, with the result that No. 1, who was blessed with the twins, read, in reply to his query: "Cover them carefully with straw and set fire to them, and the little pests, after jumping about in the flames a few minutes, will speedily be settled." While No. 2, plagued with grasshoppers, was told to "Give a little castoroil and rub their gums gently with a bone."—*Richmond Star.*

Wasting His Sweetness.

Cousin Rufus (of Boston)—These cloud-capped towers and noble palaces, majestic monuments—aye, the great earth itself—shall pass away, and, like the baseless fabric of a vision, leave not a track behind!

Cousin Kate (of Chicago)—O, Cousin Rufus, do you think there'll be time for us to get another ham sandwich.—*Judge.*

An Economical Wife.

He—I can't send my clothes to the tailor's every time they need a button. We must economize. Can't you sew on these suspender buttons yourself?

She—Here, my dear; fasten them up with a hairpin. That will save thread, you know.—*New York Weekly.*

The Same Boy.

Proud Papa (playfully)—Whose little boy are you?

Little Johnny (seriously)—I'm your little boy, but I has been washed.—*Street & Smith's Good News.*

Indirect Proof.

Gentleman (reading his wine bill)—Heavens! have I used so much wine? Then I must have been drunk every day, John.

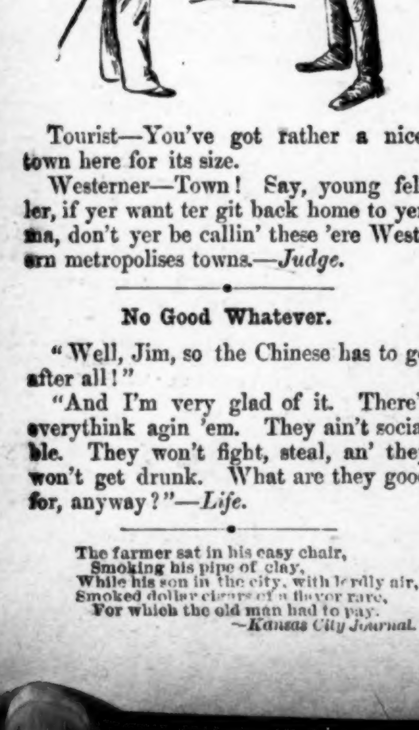
Servant (modestly)—One of us was, sir.—*Fliegende Blaetter.*

Would Then Have Suited.

Mrs. O'Hagan—I don't like the looks av the b-i-r-d.

Vender (with suppressed anger)—Are ye a buyin' it for its looks or its flavor? (Ironically.) If I'd a knowed you'd a wanted a pooty bird I'd a filled me wagon wid birds o' Paradise!—*Life.*

Western Nomenclature.



Tourist—You've got rather a nice town here for its size.

Westerner—Town! Say, young feller, if yer want ter git back home to yer ma, don't ye say that 'ere Western metropolises towns.—*Judge.*

No Good Whatever.

"Well, Jim, so the Chinese has to go after all!"

"And I'm very glad of it. There's everythink agin 'em. They ain't sociable. They won't fight, steal, an' they won't get drunk. What are they good for, anyway?"—*Life.*

The farmer sat in his easy chair,
Smoking his pipe of clay,
While his son in the city, with lordly air,
Smoked dollar cigars of a flavor rare,
For which the old man had to pay.
—*Kansas City Journal.*

THE DAIRY.

BUTTER AWARDS.

The Result of the Breed Tests at the Fair.

The amount of butter made was the only thing considered in the case. The food consumed was charged to them and the amount of butter made credited. No gain or loss in live weight was taken into account. We give the detailed record of the 45 animals:

No.	Breed.	Name.	Lbs. Milk.	Lbs. Butter.	Value of Butter.	Cost of Feed.	Net Profit.
1	Jersey.	Brown Bessie	1134.6	72.24	$33 27	$8 57	$24 70
2	Jersey.	Merry Maiden	965.0	66.70	30 72	7 62	23 10
3	Shorthorn.	Kitty Clay 4th	1592.9	62.24	28 53	8 49	20 04
4	Jersey.	Stoke Pogis Regina	1012.2	60.27	27 77	8 19	19 58
5	Guernsey.	Purity	1060.7	54.80	24 95	5 58	19 38
6	Guernsey.	Careno	922.3	54.94	25 01	6 11	18 90
7	Jersey.	Ida Marigold	985.8	59.37	27 34	8 45	18 89
8	Jersey.	Sheba Rex	1004.2	57.51	26 49	7 92	18 57
9	Guernsey.	Vesta's Valencia	985.7	52.47	23 89	5 65	18 24
10	Guernsey.	Sweet Ada	986.2	55.54	25 30	7 08	18 22
11	Jersey.	Cupid's Jersey Maid	1028.7	55.16	25 40	7 48	17 92
12	Jersey.	Romp's Princess	704.7	51.36	23 68	5 90	17 78
13	Jersey.	Flora Temple 3d	923.6	55.06	25 36	7 70	17 66
14	Jersey.	Baroness Argyle	925.5	56.22	25 90	8 27	17 63
15	Guernsey.	Materna	1058.4	54.68	24 90	7 36	17 54
16	Guernsey.	Select 8th	866.9	54.05	24 61	7 07	17 54
17	Jersey.	Exile's Lulu	988.4	54.02	24 88	7 42	17 46
18	Jersey.	Katherine of Pittsford	1062.3	54.11	24 92	7 66	17 26
19	Guernsey.	Duchess of Orleans	1044.3	50.71	23 10	5 98	17 12
20	Jersey.	Hugo Countess	684.2	48.17	22 17	5 21	16 96
21	Guernsey.	Marita	1014.6	47.55	21 65	5 72	15 93
22	Jersey.	Islip Lenox	714.6	47.70	21 95	6 14	15 81
23	Jersey.	Signal Queen	944.5	51.52	23 74	8 00	15 74
24	Shorthorn.	Bashful 2d	971.3	47.47	21 76	6 26	15 50
25	Jersey.	Sayda 3d	843.6	47.82	22 01	6 71	15 30
26	Guernsey.	Ethics of Cornwall	865.4	47.92	21 82	6 53	15 29
27	Shorthorn.	Kittie Clay 3d	1230.6	50.15	22 98	7 74	15 24
28	Shorthorn.	Waterloo Daisy	1169.1	47.77	21 89	7 28	14 61
29	Guernsey.	Roset	904.3	45.89	20 90	6 37	14 53
30	Shorthorn.	Nora	1037.2	47.20	21 63	7 33	14 30
31	Guernsey.	Aldine	767.8	44.25	20 15	6 13	14 02
32	Shorthorn.	Lady Bright	1048.8	44.52	20 40	6 90	13 50
33	Guernsey.	Lady of Ellerslie	658.3	41.44	18 87	5 51	13 36
34	Shorthorn.	Genevieve	1071.1	43.85	20 10	6 98	13 12
35	Guernsey.	Amanda	847.6	40.93	18 64	5 86	12 78
36	Shorthorn.	Betsy 7th	948.8	41.82	19 16	6 44	12 72
37	Shorthorn.	Kitty Clay 7th	831.2	42.43	19 45	6 79	12 66
38	Shorthorn.	Kitty Clay 5th	926.9	41.10	18 84	6 24	12 60
39	Guernsey.	Princess Aster 2d	866.8	41.65	18 97	6 37	12 60
40	Shorthorn.	Belle Prince	1099.6	42.17	19 32	7 18	12 14
41	Shorthorn.	Vervain	1093.6	40.48	18 55	6 56	11 99
42	Guernsey.	Essence	669.1	37.36	17 02	5 46	11 57
43	Shorthorn.	Fair Maid of Huller	884.9	39.12	17 93	6 39	11 54
44	Shorthorn.	Lucy Ann	788.7	36.36	16 67	7 08	9 64
45	Shorthorn.	Rosa	923.6	35.97	16 48	6 95	9 53

In accordance with the above record the following awards were given:

Best cow any breeed—Brown Bessie, Jersey, owned by C. I. Hood, Lowell, Mass.

Best cow each breed—Brown Bessie, Jersey, C. I. Hood, Lowell, Mass. Purity, Guernsey, G. Howard Davison, Millbrook, N. Y. Kitty Clay 4th, Shorthorn, J. K. Innis, Granville Center, Pa.

Best five cows any breed, Jersey—Brown Bessie, Merry Maiden, C.I. Hood, Lowell, Mass. Stoke Pogis Regina, Frederick Billings's estate, Woodstock, Vt. Ida Marigold, C. A. Sweet, Buffalo, N. Y. Sheba Rex, T. A. Havemeyer, Mahwah, N. J.

Guernseys—Purity, G. Howard Davison, Millbrook, N. Y. Careno, N. K. Fairbank, Lake Geneva, Wis. Vesta's Valencia, A. J. Cassatt, Berwyn, Pa. Sweet Ada, John M. Eddy, Saratoga Springs, N. Y. Materna, N. K. Fairbank, Lake Geneva, Wis.

Shorthorns—Kitty Clay 4th, J. K. Innis, Granville Center, Pa. Bashful 2d, Wm. Miller, Stone Lake, Iowa. Kitty Clay 3d, J. K. Innis. Waterloo Daisy, F. Martindale, York, Ontario. Nora, D. Sheehan & Sons, Osage, Iowa.

Best breed—The Jersey.

The summary of the work by the herds is as follows:

	Jersey.	Guernsey.	Shorthorn.
Pounds of milk	13,921.90	13,518.40	15,618.30
Pounds of butter	837.21	724.17	662.66
Value of butter	$385.59	$329.77	$303.69
Cost of food	111.24	92.77	104.55
Net profit	274.35	237.00	199.14
Cost of butter per lb	.133	.128	.158
Profit on " " "	.328	.327	.301
Av. price at which butter was credited	.461	.455	.459

Special awards—Based upon the work of the cows during the first 15 days of the first three tests:

Best cow any breed—Merry Maiden, C. I. Hood, Lowell, Mass.

Best Jersey—Merry Maiden, C. I. Hood, Lowell, Mass.

Best Guernsey—Sweet Ada, J. M. Eddy, Saratoga Springs, N. Y.

Best shorthorn—Nora, D. Sheehan & Son, Osage, Iowa.

Best five Jerseys—Merry Maiden, Brown Bessie, C. I. Hood, Lowell, Mass. Ida Marigold, C. A. Sweet, Buffalo, N. Y. Baroness Argyle, E. S. Henry, Rockville, Conn. Exile's Lulu, C. I. Hudson, Alexandria Bay, N. Y.

Best five Guernseys—Sweet Ada, J. M. Eddy, Saratoga Springs, N. Y. Materna, N. K. Fairbank, Lake Geneva, Wis. Select 8th, Francis Shaw, Wayland, Mass. Ethics of Cornwall, G. Howard Davison, Millbrook, N. Y. Amanda, Jas. Logan Fisher, Philadelphia, Pa.

Best five Shorthorns—Nora, D. Sheehan & Son, Osage, Iowa. Genevieve, W. W. Waltmire, Carbondale, Kan. Betsy 7th, Flora V. Spencer, Kiantone, N. Y. Bashful 2d, Wm. Miller, Storm Lake, Iowa. Waterloo Daisy, F. Martindale, York, Ontario.

Best herd—Jersey.

It will be seen that the Guernseys produced butter at less cost than the other two breeds. Notice, too, that there are representatives of each breed in the five best cows.

The individuality of the cow is shown plainly in this test. A cow is a cow, but whether she is a profitable dairy cow depends upon herself.

The price of butter was placed at 45 cents, which is perhaps a little too high.

The Extravagance of Poor Butter.

From time to time we have tried to demonstrate how great a luxury was poor butter. Mr. M. E. King, in a communication to the *Ohio Farmer*, puts the matter very forcibly. We quote from Mr. King's letter:

"I have been in stables where cows were fed and milked where I know that it was impossible to keep milk from becoming tainted with impurities, or in other words, filled with bacteria that are not compatible with fine butter. Where the patrons of a factory all do their best, the system holds out great inducements. A large majority of the farmers are not so situated that they can make private dairying a success. It requires a large amount of work to take care for the milk and make the butter from a large herd of cows, besides the loss in creaming. It is the feature of creaming milk that recommends the factory most strongly. I think I am safe in saying that, taking the average farmer with the various devices for creaming milk and the care given it, 25 per cent. of the butter is lost in imperfect creaming and churning. This is a serious loss, and the factory saves this. It not only saves this loss, but gets a better price for the butter.

"I saw this point illustrated to-day. A lady came into a grocery, where I happened to be, with some butter. The clerk weighed it, just five pounds. 'We are paying 14 cents in trade,' says he, so she received 70 cents in trade for butter. While in the factory on the same day, less than one hour later, a man came in with a small jar for three pounds of butter. The butter maker put three pounds of butter in the jar. 'How much?' says the man. 'Seventy-five cents,' says the butter maker. Thus the factory sold three pounds of butter for 75 cents, while the individual sold five pounds for 70 cents, and took trade for pay.

"The lady may have received all her butter was worth, yet the fact remains that her 14-cent butter was made out of the same material as the 25-cent butter. The latter was made at a good profit to the person furnishing the butter fat. The former was made at a loss. But here is the important point: Would it not be better for all concerned to furnish factories with butter fat and let them make 25 cent butter out of it and get all the fat out of the milk, than to make this fat into 14-cent butter at home and lose 25 per cent. in creaming and churning?"

Teaching the Calves to Drink.

The successful calf feeder will always use more tact than force in teaching a calf to drink. He will never allow a foolish calf to betray him into a passion or display of brute force. Do not allow the calf to suck the whole hand, or a single finger, but placing the palm of either hand over its nose, gently bring it to the milk held in a convenient sized pail in the other hand. By separating the fingers, hold back the sides of the tongue and insure the entrance of milk as the calf sucks. If the milk is warm there will be less trouble, then give the calf more, or less, of the two fingers, according to success in keeping it interested in the milk. When the calf is doing well the fingers will scarcely be touching its tongue or lips. If it acts badly give the fingers to suck and contrive to let in a dash of milk so a sup now and then will encourage the calf to continue.

I have been obliged to dip my hand repeatedly into the milk and thus give a taste of it before the calf would allow its nose to be turned down into the pail. Some calves will drink during the first to the third trial, while others will need the fingers for a much longer time.—F. E. EMERY, North Carolina Experiment Station.

Separator Milk.

At the Royal Agricultural College of Sweden experiments have been made in feeding separator milk to calves. To the fatless milk is added a hot emulsion of flaxseed, at the rate of 10 pounds of milk to one of flaxseed. The composition is as follows:

	Albumen.	Carbon.	Fats.
100 lbs. skimmed milk	3.5	5.0	0.2
10 lbs. flaxseed	1.7	1.9	3.5
Total	5.2	6.9	3.7
100 lbs. of whole milk contains	3.0	5.0	3.6

It is seen that this mixture is richer than the whole milk. A similar mixture may be made of buttermilk with a slightly different composition.

	Albumen.	Carbon.	Fats.
100 lbs. of buttermilk	3.0	5.4	1.9
10 lbs. linseed	1.7	1.9	0.3
Total	4.7	7.3	5.4

This is a cheap and doubtless a good food for calves and young pigs.

Enforcing the Law.

Dairy and Food Commissioner Reeder, of Pennsylvania, is making an interesting time for the oleomargarine men in his State. In Philadelphia alone he has made between 50 and 60 arrests.

All friends of honest dairymen will be glad to hear of his vigilance. It is to be hoped that the other State Commissioners will follow his example and prosecute all frauds.

It is said that the growth of ivy on the walls of houses renders the walls entirely free from damp, the ivy extracting every particle of moisture from wood, brick or stone for its own sustenance, by means of its tiny roots, which work their way into the hardest stone. The overlapping leaves of the ivy conduct water falling upon them from point to point until it reaches the ground, without allowing the walls to receive any moisture from the rain.

THE ORCHARD.

Culture.

An excellent way to make a more valuable farm is the establishment of a good and thrifty orchard.

Trees may now be transplanted until the buds have swollen and started to grow in the Spring. So long as the life of the tree is dormant, transplanting can be done with impunity.

By a thorough system the profit from an orchard can be doubled. Of course, this means a good deal of additional care and attention, and the only question to be considered is whether or not the increased revenue will pay for the extra trouble. In most cases it generally does. Why should it not in yours?

Nut culture is attracting attention on the Delaware Peninsula. An experimenter in the lower part of the State has been successful with English walnuts. Another has 100 Japanese chestnuts that have just come into bearing, and has recently set out 500 more. He is also experimenting with Persian, Japanese, and English walnuts, and with pecans and hazelnuts. In all he has six acres in nut-bearing trees.

In pruning, all saw cuts should be made just so close to the trunk or to a side branch as to leave no dead projection, but not so close as to cause a stoppage of the ascending sap through drying of the wood laid bare by the cut. Yet another common fault is that of letting large wounds remain exposed to the drying Winter winds without any protection of varnish or paint. There is nothing better or easier to apply than common gas tar for covering such wounds. It is better for having been first heated to boiling to thicken it.

Soapsuds are valuable as a fertilizer, both for the potash or soda of the soap and the matter which is washed from the skin or clothing. The skin wears quite fast, and the soap dissolves the exfoliated scales from it, as well as some other animal matter of a nitrogenous character. This soon decomposes and evolves ammonia, as anyone may discover by the odor of the waste of the washtub if it is kept a few days in the warm weather. Ammonia is one of the most valuable of all fertilizers. If this waste of the household is gathered in any covenient receptacle and deodorized by means of plaster added to it, or by the addition of some sulphate of iron dissolved in it, it will make the best liquid fertilizer for flowers.

Evergreen trees may be transplanted in the Winter by preparing the new ground for them in the Fall, where it is necessary on account of the freezing of the soil. The trees are dug about in the Fall or before the ground is frozen, and the long roots are cut. The trench is filled with leaves, with some loose soil on them. The holes for the trees are filled in the same manner, and when the ground about the trees is frozen they are loosened and moved to the new places. The trench around the roots is then filled with fresh soil kept for the purpose, unfrozen, and earth is heaped about the trees and covered with leaves or brush until the Spring; then the loose soil is well worked down around the roots and the trees grow right on. Large trees may be moved safely in this way.

Saxby's Query to Ingersoll.

This beautiful song (words and music, regular sheet music size) will be mailed to anyone inclosing 5 cents in stamps to D. G. Edwards, General Passenger Agent, C. H. & D. R. R., Cincinnati, Ohio.

Shipping Peaches to Europe.

Wilbor H. Bennitt, State Treasurer of Delaware, recently tried to give his old friend, Embassador Bayard, a treat by sending him a lot of Delaware peaches. Every precaution was taken to have them reach London in good condition. The varieties selected were Fox's Seedling, Walker's Variegated Free, and the Prize. Each peach was wrapped in tissue paper, packed in carriers with separate cells, and the carriers placed in the refrigerator of a steamship, which started for Europe in 10 hours after the fruit was picked from the trees. In spite of all this, very few of the peaches arrived in good condition. Embassador Bayard writes: "This is a great pity, because if some mode of air-tight transportation could be invented it would lead to a great profit. All peaches here are grown with the greatest care in hothouses, and are luxuries for the rich alone. I do not think I have seen more than six—and generally two or four—peaches at a time on the tables of very rich and titled people. I have paid more for two peaches here than for a basketful at home. One cantaloupe melon costs as much here as a basketful at home.

"The hothouse peaches are very delicate, thin-skinned, and pleasant, but lack the flavor which the Delaware peach bestows. In the progress of time the shipment of our fruits will become practical and will lead to good results; but now it is not practical."

Two-thirds of all the cotton duck produced in the world is made within 20 miles of Baltimore.

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THE FIG.

The Fruit can be Successfully Cultivated in the South.

ALTHOUGH the fig is not a native, yet it adapts itself, and is as much at home as any other tree we grow; yet it is very rarely found, and what few are planted get no care or attention. What fruit they yield are usually devoured by the natives even before they are ripe, and what few appear on fruit stands in cities are to the majority of passers and unknown fruit. I know of no orchards of them, and really do not believe that a bushel of figs are produced annually in the surroundings of Memphis.

COMMON FIG (*Ficus carica*)—a, fruit; b, section of fruit.

Nurserymen raise them sparingly, as no one buys, and none can be persuaded to plant. Some of the Italian and German residents plant a bush more for the novelty than anything else. When you find an intelligent gardener who is so situated as to raise a few, takes good care that his own family is first served, and that is as far as they go. Leading doctors always advise their use for convalescents whenever they can be had as a delicate article of nourishing food. Many of the leading citizens would buy them freely, but they are not to be had; they are looked upon as a foreign fruit, and only to be had at leading groceries. Further, no one knows even where or how they grow or how they get here. All this is not placing an intelligent Southern people in a very favorable light; but it is the fact, nevertheless.

Everybody is willing to pay a big sum annually for imported figs. We hear of their being produced on the Pacific Coast, but that is foreign to us. Still figs are just as easy raised in the Southern Atlantic States as the Chickasaw Plums are, and just as sure an annual crop, if they were planted by the 1,000 acres. Then the supply would create a demand for their use in a green state; next the area that would be required to produce enough to meet the demands for drying. And here, let me say, that figs are the easiest of all fruits to preserve by drying, though I will not here at this time stop to discuss that part of it.

I have tried for long years to induce those who could and were able to plant extensive fig orchards, even all over the South, but I have found it a hard matter, next to an impossibility, to induce a land owner or a capitalist to do anything if it goes over 30 or 60 or 90 days.

I can safely say I have never sold a fruit tree to anyone in these surroundings but the first question is, how long before it will bear? It is therefore with fig planting as with other planting in these grand Southern States, those who have the will, skill, knowledge, ability, and those who have the means, won't look or listen to anything if they can't see immediate returns.

Time may change, and industries may develop, and those Southern States, so eligible, has only to lie still—dormant, especially in fruit culture for commerce —till her time comes.—JAMES STEWART, Memphis, Tenn.

From a Drouth-Stricken Region.

EDITOR AMERICAN FARMER: I posted you up to July on central Indiana. Now for the rounding up of the year. Drouth left us an average wheat crop, also hay, oats, and rye; corn, potatoes, vegetables, and fruit about half a yield.

For the lessons of a dry year: First, I would say prepare for drouth. Nearly every farmer who has springs or creeks on his land could easily utilize them for garden stuff and vegetables. Good wells, with wind pump and large tank, pay their expense in one year in supplying our tables with abundance of good things. For trial, in the middle of the drouth I broke up eight acres deep of bottom land; sowed in millet in June, and in September harvested about one and a half tons of splendid hay, showing that millet will catch in drouth.

Sugar and stock beets prove a bonanza of a dry year for our milch cows. The Nebraska bean went through without wilting, and yielded two good crops, the first in July and again in September. I harvested a field of oats July 15, and then sowed one and one half bushels of oats on same field. The seed laid in the ground without sign of germinating until Sept. 1, when our drouth was broken by copious rains; now for two months they have made a huge growth, covering the ground in a solid mat, and will make fine Fall pasture. I sowed a field in wheat and rye for Winter pasture in August, which did like the oats, and will keep our stock going until holidays. So you see, with our light corn crop, well in stock, with 25 tons of nice fodder housed, we expect to pull through a short year fairly.—DAVID T. PRITCHARD, Henry, Co., Ind.

Everybody is familiar with the music of the katydid. It is the male that has the voice. At the base of each wing is a thin membranous plate. He stretches the wing covers and rubs the two plates together. If you could rub your shoulder blades together you could imitate the operation very nicely.

THE RUSSIAN THISTLE.

An Organized Campaign Against This Imported Pest.

Some months ago THE AMERICAN FARMER contained a long article descriptive of the new enemy the wheat growers of the Northwest have to contend against—the Russian Thistle. This belongs to the lamb's quarter family of weeds, and was introduced some 17 years ago in flaxseed brought over by Russian immigrants and sowed near Scotland, S. D. From a small beginning it has spread through the Dakotas and into Minnesota, Iowa, Nebraska, and Wisconsin. The seed sprouts in May or June, and by September has developed into a plant from two to six feet in diameter and half as high, forming a dense, bushy mass of rigid branches, offering an effectual barrier to the passage of man or beast. At intervals of half an inch or less on the branches are clustered three sharp spines a quarter to half an inch long.

The full-grown plant, shaped like an inverted saucer, two to six feet in diameter, all grows from a single root less than half an inch thick. When the ground is frozen in November and the prairie breezes begin to practice for the Winter this small root is twisted off and the whole plant turns up on edge, like a cart wheel, and goes off before the wind scattering seeds at every revolution.

It takes complete possession of cultivated land, choking out the wheat and other crops. The rigid bulky plants often make it impossible to run harvesting machinery, and sometimes even stops plows. It is often necessary to bind leather or other protection on the horses' legs before they can be driven among the spiny weeds. Trains have been stopped by the thistles banking up on the tracks. Prairie fires are carried long distances by the burning thistles blowing across fire breaks. In many other ways this terrible weed causes serious damage.

A movement is now on foot in the Northwest to petition Congress to give the Secretary of Agriculture power to institute vigorous measures, as was done in the case of pleuro-pneumonia among cattle a few years ago. A judicious expenditure of $2,000,000 now would probably exterminate the thistle. It did damage to that amount last year. This year the loss is twice that sum, and if the weed is allowed to go unchecked there is every probability that the damage will go on increasing in geometrical ratio.

L. H. Dewey, Assistant Botanist of the Agricultural Department, acting under orders from Secretary Morton, left Washington last week for the Northwest to make an investigation into the extent of the damage done to the crops.

Quick Winding Watches.

Our readers will be interested to learn that the Quick-Winding Watches manufactured by the Waterbury Watch Company received the medal of the World's Columbian Exposition. As the rules governing awards declare that there will be but one class of medals, this award is equivalent to the highest class medal of other exhibitions. A diploma was also awarded the company for artistic display, for general exhibit, and for the unique and now famous Century Clock, which was rated as one of the very remarkable attractions of the Manufactures Building.

Transplanting Pecan Trees.

A discussion is going on through the columns of the Charleston *News and Courier* between Prof. Newman, of the South Carolina Experiment Station, and Herbert Post and Prof. Stelle, of Texas, as to the comparative merits of seed-planting and transplanting pecan trees. Messrs. Post and Stelle are very positive that the tap-root is necessary to make a bearing pecan tree, and that this is almost inevitably injured in transplanting. Prof. Stelle has studied the pecan for 20 years, and found that transplanted trees were almost invariably failures, while those from nuts grew vigorously and bore profusely.

Hard Times Made Easy.

TO THE EDITOR:—

You are probably aware that millions of America's men are tobacco spitting and puffing billions of dollars away. The total value of tobacco consumed is appalling;—all this can be saved. The nerve nicotizing and destroying effects of using tobacco, in any form, upon the physical and mental organization is simply terrible. One of Chicago's great newspapers, the "Inter Ocean," devoted an entire eight page, illustrated in eight colors, supplement to tell all about *No-To-Bac*, the only reliable and *absolutely guaranteed tobacco habit cure* in all the world. As a remedial agent in destroying the desire for tobacco, eliminating the nerve-killing nicotine, and increasing the weight, making pure, rich blood, and invigorating the whole system, and vitality of the user, *No-To-Bac* performs miracles. If the readers of your paper are interested in learning all about the injurious effects of tobacco, and how it can be easily, economically and permanently cured, we will, if you let them have a copy as long as they last. Address the Chicago Office, 45, Randolph Street; or the main office and laboratory, Indiana Mineral Springs, Ind.

Respectfully yours,
A. L. THOMAS, Pres.
Sterling Remedy Co., Makers of No-To-Bac.

Six Months' Food for Paris.

The French Commissariat and the Minister of War have been figuring on another siege of Paris and the amount of food that would necessarily have to be laid in for man and beast. Here are the figures: Breadstuffs, 243,000 tons; meat, 118,100 tons; salt, 14,793 tons; dry vegetables, 34,440 tons; potatoes, 295,260 tons; milk, 6,602,900 cubic meters; coal, 1,000,000 tons; hay, 688,940 tons; oats, 53,052 tons; straw, 68,894 tons.

The above are given as the very lowest estimates on a six months' food supply for the 3,300,000 human beings and the 2,750,000 domestic animals now within what is known as "the outer defense lines." Such a supply would cost $100,000,000.

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THE Northwestern Ohio Poultry and Pet Stock Company, organized 1891 and incorporated May, 1893, will hold their third annual exhibition in Tiffin, O., Jan. 10 to 13, 1894. J. Y. Bicknell, of Buffalo, N. Y., and Sharp Butterfield, of Windsor, Canada, will judge the show. The company offers liberal, regular, and special cash premiums, sparing neither effort nor money to make this show the best ever held in the State of Ohio. Send for premium list to D. T. BILLER, Secretary, 49 Main St., Tiffin, O.
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